DEPARTMENT OF COMMERCE
PERSONNEL MANAGEMENT DEMONSTRATION PROJECT EVALUATION

YEAR EIGHT REPORT

Washington, DC
June 6, 2007

FINAL REPORT

Booz | Allen | Hamilton

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EXECUTIVE SUMMARY

This report presents Booz Allen Hamilton Inc.'s (Booz Allen) assessment of Year Eight[1] of the Department of Commerce (DoC) Personnel Management Demonstration Project (hereafter referred to as the Demonstration Project). This Executive Summary provides a summary of the purpose of the Demonstration Project, the status of the personnel innovations after eight years, and recommendations for future actions.

ES.1. The Department of Commerce has completed eight years of the Personnel Management Demonstration Project, designed to test and evaluate a series of alternative personnel practices and to determine the generalizability of these interventions elsewhere

In March 1998, Department of Commerce initiated a five-year Personnel Management Demonstration Project as a means of testing and evaluating a series of personnel interventions. This effort was undertaken to determine whether alternative personnel practices are more successful in helping to achieve agency goals than traditional personnel practices. The success of these interventions during the Demonstration Project would help to determine whether any or all of the interventions can be beneficially implemented elsewhere within DoC as well as government-wide.

In 2003, DoC requested and received permission from the Office of Personnel Management (OPM) to both extend and expand the Demonstration Project (the extension was approved through an administrative letter from OPM, dated February 14, 2003; the expansion was announced in a *Federal Register* notice (see Appendix A-4) dated September 17, 2003). The extension permitted DoC to continue operating the Demonstration Project for an additional five years, ending in March 2008 (Years Six through Ten). As of October 5, 2003, DoC was also given permission to expand the coverage of the Demonstration Project to additional organizations within DoC and to increase the number of participants up to the legal maximum of 5,000 participants.

The Demonstration Project was originally designed to apply some of the human resource interventions from an earlier DoC Demonstration Project at the National Institute of Standards and Technology (NIST). The NIST Project achieved highly successful results and, at its conclusion, the interventions were made permanent. The current Demonstration Project seeks to build on the success of the NIST Project and determine whether or not these interventions can be successfully implemented within DoC to a wider range of occupational areas and within organizations with different missions.

1 Year Eight covers the time period of April 1, 2005 to March 31, 2006.

ES.1.1. The general objectives of this Demonstration Project emphasize the development of a higher performing workforce, as well as greater efficiency and flexibility of personnel processes

This Demonstration Project is designed to foster improved organizational and individual performance. This is to be done by recognizing high quality performance and recruiting and retaining high performers. The stated project objectives are:

- Increased quality of new hires
- Improved fit between position requirements and individual qualifications
- Greater likelihood of getting a highly qualified candidate
- Increased recruitment and retention of high performing employees
- Improved individual and/or organizational performance
- More effective human resources (HR) management
- More efficient human resources management
- Increased delegation of authority and accountability to managers
- Better human resources systems to facilitate organizational mission and excellence
- Continued support for goals in recruiting, rewarding, and retaining minorities, women, and veterans
- Continued provision of opportunities for a diverse workforce
- Maximization of the contributions of all employees.

ES.1.2. As the evaluators of the Demonstration Project, Booz Allen conducted the Year Eight evaluation to determine the impact of the interventions in Year Eight and over the eight-year period

All Demonstration Projects under 5 U.S.C. 47 must be evaluated, by statute, for the life of the project. OPM requires that every Demonstration Project be rigorously evaluated by an outside evaluator and clearly defines processes for evaluating Demonstration Projects. Following OPM guidelines, evaluators submit formal assessment reports at specified time intervals over the course of a Demonstration Project. As the evaluator of the DoC's Demonstration Project, Booz Allen submitted an Implementation Year Report, Operational Year Report, and Summative Year Report that assessed the implementation and operation of the Demonstration Project during Year One, Year Three, and Year Five, respectively. In addition, Booz Allen submitted reports in Year Two and Year Four that were designed to serve as mid-course checks. During Years Six through Ten, Booz Allen continues to conduct annual evaluations to monitor and evaluate the effectiveness of these personnel interventions put in place by DoC.

ES.1.3. The Year Eight Report focuses exclusively on analyses of objective data; where appropriate, comparisons are made between the Demonstration and Comparison Groups and across time

By design, the Year Eight Report relies solely on objective data. A main source of information was the datafiles provided by DoC with data pertaining to performance, compensation, recruitment, and demographics for the time period April 2005 to March 2006 for both the Demonstration Group and the Comparison Group. In addition, we collected and analyzed HR summary-level data on recruitment and related activities.

Wherever possible, comparisons were drawn between the Demonstration and Comparison Groups as a means of assessing the degree to which the interventions appear to be having an impact on Demonstration Group participants relative to the experiences of the Comparison Group participants. Similarly, where feasible, analyses were conducted to show the trends that are occurring across time with respect to the impact of the interventions.

ES.1.4. The Year Eight evaluation presents results for the Demonstration Project overall as well as results by wave

In 2003, DoC extended the Demonstration Project for an additional five years and also expanded it to include additional members, some representing organizations new to the Demonstration Project. With the extension and expansion, there are essentially five subsets of participants in the Demonstration Group and Comparison Group. The Demonstration Group is comprised of:

- Participants whose organizations were new to the Demonstration Project in Years Six-Ten and were added to the Demonstration Group (hereafter, referred to as "New Demo," as needed, and included in "Demo Group Wave 2")
- Participants whose organizations were in the original Demonstration Group (i.e., Years One-Five) and who remained in the Demonstration Group in Years Six-Ten (hereafter, referred to as "Original Demo," as needed, and included in "Demo Group Wave 1")
- Participants whose organizations were in the original Comparison Group in Years One-Five and who were transferred to the Demonstration Group for Years Six-Ten (hereafter, referred to as "Comp to Demo," as needed, and included in "Demo Group Wave 2").

The Comparison Group is comprised of:

- Participants whose organizations were in the original Comparison Group (i.e., Years One-Five) and who remained in the Comparison Group in Years Six-Ten (hereafter, referred to as "Original Comp")
- Participants whose organizations were new to the Demonstration Project in Years Six-Ten and were added to the Comparison Group (hereafter, referred to as "New Comp").

The reference to "waves" in these definitions addresses the fact that the expansion changed the composition of the Demonstration Group, to include both individuals who have been in the Demonstration Project for five years (Wave 1) and those who are new to it (Wave 2). Therefore, it is important to consider that they may have different experiences. For this reason, as appropriate, some analyses that are conducted on Demonstration Group data will also be broken out by Wave 1 and Wave 2. This will provide a means of looking at both the shorter term and longer term impact of the interventions.

ES.2. At the conclusion of eight years, evidence exists that a number of the interventions are having the desired effects

Results of the Year Eight assessment showed success with a number of the interventions. Many of the interventions that had been effective in past years, such as pay for performance, flexible entry salaries, and more flexible pay increase upon promotion, continued to demonstrate positive results.

ES.2.1. The pay for performance system continues to exhibit a positive link between pay and performance

A series of interventions were implemented during the Demonstration Project to improve the relationship between high performance and financial reward. These interventions include performance-based pay increases, performance bonuses, and supervisory performance pay. Year Eight analyses highlight the following:

- Demonstration Group participants received larger average performance-based pay increases than did Comparison Group participants (3.36 percent of salary[2] versus 2.84 percent of salary)
- Among the four career paths[3], ZP and ZA fared best for performance-based pay increases and ZS fared best for performance-based bonuses
- Demonstration Group participants received larger performance-based bonuses/awards than did Comparison Group participants (1.97 percent versus 1.65 percent)
- After steadily increasing over the years, the average performance appraisal score had decreased in Year Seven and then increased in Year Eight, with an average performance appraisal score of 86.3; the average performance appraisal score differed by wave (the Wave 1 average performance appraisal score was 86.9 points and the Wave 2 average performance appraisal score was 85.0 points)
- Based on a regression analysis, performance score was a consistent predictor of performance-based pay increase, across all four career paths, providing support for a pay and performance linkage. The only other consistent predictor across all four career paths was organization, such that higher performance-based pay increases were associated with being in certain Commerce organizations

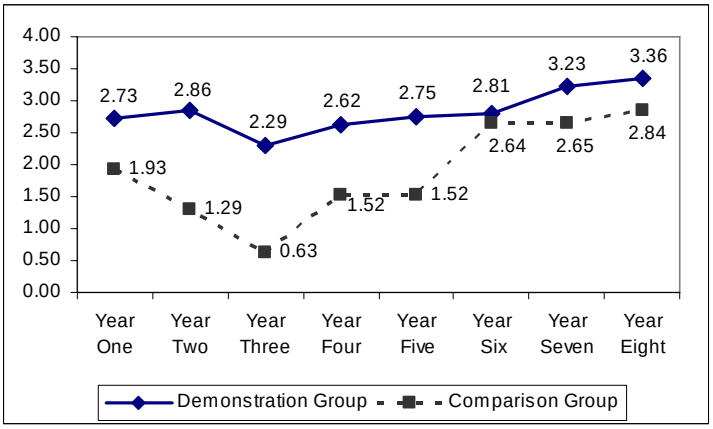
2 *Unless stated otherwise, references in this document to "percent of salary" or "pay increase percentage" pertain to performance-based pay increases from the beginning to the end of Year Eight; this concept is not intended to be synonymous with the "percent of percent" concept often discussed in the context of the Demonstration Project.*

3 *Under the Demonstration Project, Demonstration Group occupations are grouped into four broad career paths: ZP – Scientific and Engineering, ZT – Scientific and Engineering Technician, ZA –Administrative, and ZS – Support.*

- The flexible pay upon promotion intervention continues to be successful
- The supervisory performance pay intervention continued to reward supervisors who had reached the top of their pay bands (many of whom were performing reasonably well); however, it did not (by design) necessarily reward all high performing supervisors.

Figure ES-1 displays trends for average performance-based pay increases over Years One through Eight of the Demonstration Project. This figure depicts how Demonstration Group average performance-based pay increases have varied from 2.29 to 3.36 percent and have always been higher than the Comparison Group. Figure ES-2 displays trends for average bonuses/awards over Years One through Eight of the Demonstration Project. Over time, average bonus percentages in the Demonstration Group have remained relatively constant, with a slight upward trend in the past few years. Meanwhile, average award percentages in the Comparison Group have fluctuated over the years. Regardless of whether the original or expanded bonus analysis is used as a comparison point, the Demonstration Group average bonus percentages were higher in Year Eight than the Comparison Group average award percentages.

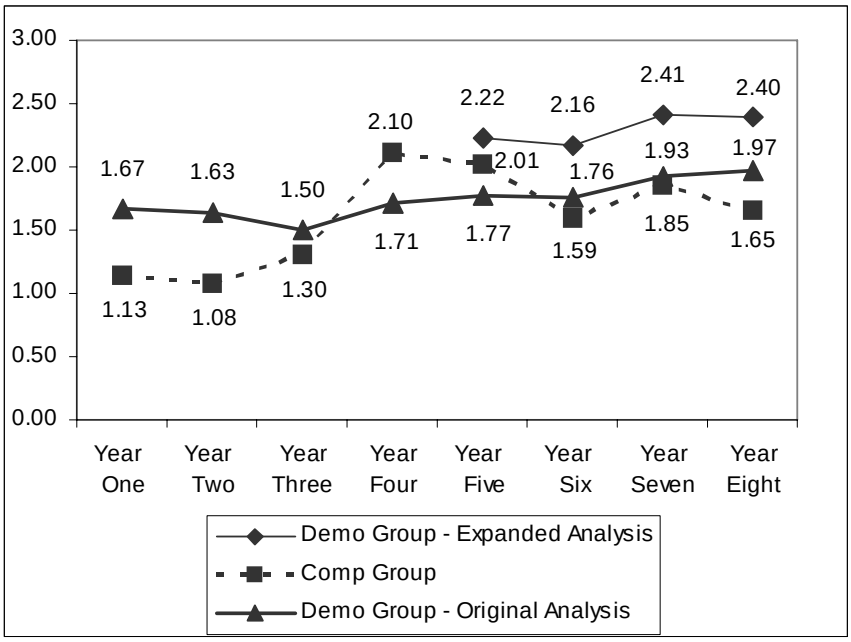
Figure ES-1. Trend Analysis of Average Percent Salary Increases



Note:

1. *The Comparison Group Year Two data point was revised in Year Three to reflect a correction in the formula used to calculate average salary increase percentage.*

Figure ES-2. Trend Analysis of Average Bonus/Award Percentages



ES.2.2. Most of the Demonstration Group scientists and engineers who were made permanent had completed or nearly completed their three-year probationary periods, indicating that managers are making use of this intervention by taking a longer timeframe to evaluate performance

The three-year probationary period for scientists and engineers intervention was designed to allow supervisors the ability to make permanent hiring decisions for research and development (R&D) positions based on employees' demonstrated capabilities in the full R&D cycle. This intervention provides these supervisors with the ability to terminate poor performing employees any time during the three-year period rather than being limited to the typical one-year probationary period. In Year Eight, most employees who were made permanent had completed their three years or were made permanent during their third year. Only a small percentage (24 percent) were taken off probation (i.e., made permanent) in just their first or second year, which indicates that managers are making use of this intervention by allowing employees to remain in probationary status for a longer period of time, thus giving employees a longer time horizon in which to demonstrate their skills.

E.S.2.3. While many of the recruitment and staffing interventions under the Demonstration Project are no longer unique, those that are being enacted are working well

The recruitment and staffing interventions are intended to attract high quality candidates and speed up the recruiting and examining process. These interventions include delegated examining authority[4], local authority for recruitment payments, flexible entry salaries, and flexible paid advertising. In Year Eight, our findings suggested that the Demonstration Project is having success with some of the unique recruitment and staffing interventions. For

4 This was originally referred to as "agency-based staffing" in the Demonstration Project.

example, flexible entry salaries provided managers the latitude to attract competitive candidates.

E.S.2.4. Many of the retention interventions are having the desired effect as employee motivators

The series of retention interventions available to the Demonstration Project have the potential to motivate and retain high performing employees. The interventions that were intended to impact retention include the broadband classification system, performance-based pay increases, performance-based bonuses, local authority for retention payments, supervisory performance pay, and more flexible pay increase upon promotion. The intent was that these interventions would offer a structure (i.e., broadbanding) and incentive to motivate high performers to stay. In Year Eight, it appears that many of these interventions are having the desired effect. Objective data analyses show that turnover is greater among lower performers and that managers are taking advantage of being able to offer flexible pay increases upon promotion.

E.S.2.5. The Demonstration Project interventions continue to reflect a system in which there is no evidence of unfair treatment based on race, gender, or veteran status

Consistent with previous years, analyses suggest that the Demonstration Project has not been detrimental to the recruitment, compensation, or retention of minorities, women, or veterans. In Year Eight. the proportion of minority, women, and veteran new hires to the Demonstration Group was greater than their representation in the employee population overall. As occurred in previous years, data also suggest that the pay for performance system did not reward participants differently based on race, gender, or veteran status in terms of average performance increases or bonuses. Furthermore, there was greater consistency in pay increase percentages and average bonus/award percentages across each subgroup (i.e., minority, gender, or veteran status) in the Demonstration Group than in the Comparison Group. Finally, in Year Eight, there was some variance in turnover rates in the Demonstration Group based on race/national origin groups; however, the differences were less pronounced among high performers.

ES.3. Recommendations are offered to help focus the Demonstration Project as it moves forward

The Year Eight findings suggest that the Demonstration Project is operating effectively and has experienced success with a number of the interventions such as the ability to link pay and performance, retain high performers and turn over low performers, and use more pay flexibility to attract candidates and promote employees. A series of recommendations are offered to enhance aspects of the Demonstration Project based on Year Eight findings as well as trend analyses covering the past eight years.

E.S.3.1. DoC should determine if the performance appraisal system's rating scale needs a re-calibration

Over the years, the average performance appraisal score has shifted upward. Among Wave 1 participants (the group that has been in the Demonstration Project from the beginning), the average score has increased from 82.0 in Year One to 86.9 in Year Eight. It is certainly feasible that individual performance has increased over time, which would be reflected in a higher aggregate score as well as noticeably higher organizational performance. However, it is also likely that another factor at play is rating creep.

Performance appraisal systems are often designed to reasonably approximate a "bell curve," wherein the majority of individuals receive ratings in the middle of the rating scale and only a smaller number get ratings at either end (the lowest scores and the highest scores). In the case of the Demonstration Project, in Year Eight, 33 percent of the employees received scores in the 90-100 range on the 100-point scale. Accordingly, the rating distribution is now skewing toward the higher end of the scale. The challenge in this situation is that it becomes increasingly more difficult to differentiate high performers as it becomes more commonplace for employees to receive high scores.

We recommend that DoC examine whether the rating scale needs recalibration. The first step would be to do a more detailed analysis to determine the extent of the situation and if any trends or patterns are evident. The next step would be to review procedures and guidance provided to rating officials on how to determine scores, including guidance on how to achieve an appropriate range of scores across a range of performance levels. In addition, it will be important to provide guidance to the Pay Pool Managers on their role in validating the range of scores used by their Rating Officials. Finally, as necessary, DoC should develop and disseminate communications to employees regarding rating definitions, how adjustments are needed over time to the system, and the implications of changes for their own performance appraisals.

Moreover, DoC should review whether managers are closely and consistently following the Benchmark Performance Standards to ensure that scores match each employee's performance and performance plan. DoC should revisit job objectives and make sure that job objectives are written in a way that is conducive to objective evaluation. DoC should continue to review job objectives and determine if they are consistent with the concept of "SMART" objectives; that, objectives that are: 1) Specific, 2) Measurable, 3) Aligned to the organizational mission, vision, and goals, 4) Realistic/Relevant, and 5) Timed. Achievement of the objective, against these criteria, should be scored at the midpoint on the rating scale.

E.S.3.2. DoC should perform periodic reevaluations of the broadbanding structure

In Year Eight, a number of Demonstration Group participants were affected by salary capping, that is, Demonstration Group participants who had eligible performance ratings but whose salaries were at the maximums for their pay bands. Overall, in Year Eight, 15 percent of Demonstration Group participants were capped and an additional seven percent were nearly capped. In Year Seven, we made a recommendation to give proper attention to this issue given its impact on perceptions about the pay for performance system. That is, we

urged paying attention to how salary capping can impact employee motivation and what actions can be taken, such as developing staff for promotion to the next band (when staff are in positions for which a band promotion is possible) or cross-training staff who need to first move laterally before progressing upward. While some pay pool managers compensate pay capped employees through the bonus process, alternate strategies should also be considered.

Having this proportion of employees salary capped does not, in itself, indicate that the broad bands are out of sync; indeed, any broadbanding system is likely to have a certain proportion of employees at the maximum. However, the presence of this proportion of salary capping does warrant attention. Given this, this year, we recommend that DoC look at the salary capping issue from the structural perspective by ensuring that it is periodically reexamining the broadbanding structure. One, DoC should reexamine whether shifts needs to occur in the minimum and maximum salary for the band; best practices suggest that shifts in the bands should be based on identifiable shifts in market rates as the driver for change. And two, DoC should reexamine whether the bandwidths need revisions; that is, whether the mapping of bands to GS grade levels is still sufficient.

E.S.3.3. DoC should engage in strategic succession planning efforts to prepare for turnover of seasoned supervisors

In Year Eight, 6.2 percent of the Demonstration Group supervisors turned over. This turnover rate is slightly lower than the overall turnover rate for the Demonstration Group (7.6 percent). However, when supervisor turnover is examined separately for supervisors who are or who are not eligible for supervisory performance pay, a distinctly different picture emerges. At 13.2 percent, turnover is considerably higher for those supervisors who are eligible for supervisory performance pay. Given that supervisory performance pay tends to associated with the more tenured, seasoned supervisors, this finding suggests that the Demonstration Project may be losing not only good performers but also institutional knowledge as these individuals retire or seek other opportunities.

We recommend that DoC take a strategic approach to succession planning to ensure no lapse in mission support or team leadership due to supervisor departures. For example, we recommend creating a short list of potential internal replacements, baseline their competencies relative to a supervisory role, and engage in efforts to ensure that these individuals receive the appropriate development opportunities to prepare them for supervisory roles. This may include developmental activities such as mentoring, shadowing, key assignments, involvement in key meetings, further competency development, and/or training. Moreover, the effort to create the short list needs to be developed in an objective, defensible manner, ideally rooted in a documented, explicit set of competencies. Finally, we recommend creating mechanisms for knowledge management to ensure that institutional knowledge is also captured and retained.

E.S.3.4. DoC should focus attention on retention of high performers in the ZA career path

Every year since Year Three (the first year this information was tracked), the ZA career path has had the lowest or second lowest turnover rate of all the career paths. In Year Eight, ZA had the second highest turnover rate, at 10.6 percent. A partial explanation may be

retirement, which accounted for 38 percent of the turnover in the ZA career path. However, the remainder of the staff turned over for a variety of other reasons including termination (30 percent) and resignation (21 percent). Moreover, among those in the ZA career path who turned over, 8.4 percent who left had performance appraisal scores of 80 or higher – a greater percentage than for any other career path.

Following the tenets of pay-for-performance, and its emphasis on performance, some of this turnover may have been welcomed by the organization. However, even when turnover occurs for legitimate reasons, it is important to consider the impact on those who remain. To this end, we recommend that DoC consider the dynamics within the ZA career path and consider whether special initiatives should be enacted to ensure that the remaining high performers feel engaged, valued, and inspired to stay with the organization. This could take several forms, including career mentoring, buddy programs for new hires, recognition and rewards, and other means of showing staff how their work contributes to the mission of the organization.

E.S.3.5. DoC should be more proactive in dealing with repeat lower performers

By its very nature, a pay-for-performance system provides the data that organizations need to identify and deal with lower performers. In theory, lower performance appraisal scores are triggers to provide employees with extra skill development, training, and/or coaching, with the aim of boosting their performance. If successful, the performance appraisal scores of lower performers who receive and respond to developmental actions should increase in subsequent years.

The Year Eight data showed that, among the Demonstration Group participants with lower performance appraisal scores (59 or below), only 3 of 13 (25 percent) turned over. Furthermore, these three individuals left due to retirement, not for performance-related reasons. Of the ten who remained, five (50 percent) had been lower performers for two or three consecutive years. While organizations have, for years, faced the daunting (and time-consuming) task of dealing with lower performers, we recommend that DoC pay particular attention to those employees whose performance has been consistently in the lower range of satisfactory.

We recommend that DoC establish a process to regularly track those with lower performance scores, with particular attention to those who appear on the list year after year, and set a standard for how long employees may stay within the lower performance ratings. Next, we recommend developing a formal process, within the Demonstration Project, for crafting developmental action plans and documenting progress against the action plans. Finally, DoC should reiterate and carry out its policies for dealing with employees whose performance has been consistently in the lower range of satisfactory. While important in any pay system, taking action in response to lower performance is particularly important in a pay-for-performance so it is clear that the system is not about greater pay, but rather that the system is about being treated appropriately (i.e., greater pay, developmental action) relative to demonstrated performance. By continuing to allow these employees to remain in the organization, it could be de-motivating for those who are higher performers, as well as pose potential legal ramifications for not taking action.

E.S.3.6. DoC should continue to dedicate resources toward the management of Demonstration Project data

Given the increasing complexities of the Demonstration Project data, as a greater number of employees are included and as analyses become increasingly more sophisticated, DoC should continue to dedicate resources to the Demonstration Project data. The accuracy of the analyses is predicated on the quality of the data and therefore data management is paramount. This emphasis on data quality should extend beyond data management at the headquarters level and should also include ensuring that the proper training, tools, and mechanisms are in place to ensure that data are accurately and consistently managed at the participating organization level.

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1. INTRODUCTION

This chapter presents a brief background on the Department of Commerce Personnel Management Demonstration Project as well as the purpose and structure of this report.

1.1. The Department of Commerce has completed eight years of the Personnel Management Demonstration Project, designed to test and evaluate a series of alternative personnel practices and to determine the generalizability of these interventions elsewhere

In March 1998, the Department of Commerce (DoC) initiated a five-year Personnel Management Demonstration Project (hereafter referred to as the Demonstration Project) as a means of testing and evaluating a series of personnel interventions. This effort was undertaken to determine whether alternative personnel practices are more successful in helping to achieve agency goals than traditional personnel practices. The success of these interventions during the Demonstration Project would help to determine whether any or all of the interventions can be beneficially implemented elsewhere within DoC as well as government-wide.

In 2003, DoC requested and received permission from the Office of Personnel Management (OPM) to both extend and expand the Demonstration Project (the extension was approved through an administrative letter from OPM, dated February 14, 2003; the expansion was announced in a *Federal Register* notice (see Appendix A-4) dated September 17, 2003). The extension permitted DoC to continue operating the Demonstration Project for an additional five years, ending in March 2008 (Years Six through Ten). As of October 5, 2003, DoC was also given permission to expand the coverage of the Demonstration Project to additional organizations within DoC and to increase the number of participants up to the legal maximum of 5,000 participants.

The Demonstration Project was originally designed to apply some of the human resource interventions from an earlier DoC Demonstration Project at the National Institute of Standards and Technology (NIST). The NIST Project achieved highly successful results and, at its conclusion, the interventions were made permanent. The current project seeks to build on the success of the NIST Project and determine whether or not these interventions can be successfully implemented within DoC to a wider range of occupational areas and within organizations with different missions.

OPM clearly defines processes for evaluating Demonstration Projects. Following OPM guidelines, evaluators submit formal assessment reports at specified time intervals over the course of a Demonstration Project. As the evaluator of the DoC's Demonstration Project, Booz Allen Hamilton Inc. (Booz Allen) submitted an Implementation Year Report, Operational Year Report, and Summative Year Report that assessed the implementation and operation of the Demonstration Project during Year One, Year Three, and Year Five, respectively. In addition, Booz Allen submitted reports in Year Two and Year Four that were designed to serve as mid-course checks. During Years Six through Ten, Booz Allen

continues to conduct annual evaluations to monitor and evaluate the effectiveness of these personnel interventions put in place by DoC.

1.2. This report provides an assessment of Year Eight of the DoC Personnel Management Demonstration Project

This Year Eight Report assesses the Demonstration Project's eighth year of operation, April 2005 to March 2006. This report mirrors the format of the reports from Year Two, Year Four, and Year Six in that it primarily focuses upon analyses of objective data (a full evaluation – including survey, focus groups, and interviews – will be next conducted in Year Nine). The intended audience for this report is DoC managers, employees, and key stakeholders who may be interested in keeping abreast of the current state of the Demonstration Project and tracking trends as the personnel interventions take effect. In addition, DoC uses the report to provide an update on the impact the Demonstration Project is having on ensuring protection for, or adherence to, equal employment opportunity, veterans, Merit Systems Principles, and Prohibited Personnel Practices. Interwoven throughout this report, Booz Allen presents:

- A brief review of the Demonstration Project
- An analysis of objective data collected during the eighth performance year, including performance scores, pay increases, and bonuses
- Comparisons of Demonstration and Comparison Groups
- An assessment of the impact of the Demonstration Project on equal employment opportunity and veteran status
- Usage of recruitment and retention interventions
- Trend data across performance years, where appropriate
- Conclusions on the efficacy of the personnel interventions and the Demonstration Project
- Recommendations for improving the personnel interventions and the Demonstration Project overall.

1.3. The structure of this report parallels the previous reports; it evaluates each personnel intervention and recommends actions for continued operation

This Year Eight Report represents the eighth in a series of ten reports that Booz Allen prepares to assess the Demonstration Project. Each report builds on data and findings from previous reports, thereby permitting trend analyses over the course of the Demonstration Project. To facilitate cross-comparisons of reports by those who are reading the reports annually, this and subsequent reports will follow a similar structure. This report contains the following chapters:

Chapter 2 of this report, "DoC Demonstration Project and its Evaluation," begins with a brief description of the Demonstration Project, including the objectives guiding the project, the organizations and types of employees included, and the project interventions. The second

half of Chapter 2 describes the Demonstration Project evaluation. The research questions relevant to the project are covered, followed by a discussion of the project evaluation phases.

Chapter 3, "Data Collection and Analyses," contains descriptive information on the objective data collection procedures used during the project evaluation, as well as the analyses conducted.

Chapter 4, "Findings and Conclusions," focuses on the major interventions that are being tested during the Demonstration Project. Each section is dedicated to a set of interventions. Each conclusion is explained and then followed by findings that are supported by objective data and/or summary human resources (HR) data. Data are presented in table format, when appropriate, to facilitate understanding.

Chapter 5, "Recommendations," contains recommendations for the interventions, as appropriate. We also provide general recommendations that may not pertain to a specific intervention, but address organizational or management issues that affect the Demonstration Project.

A series of appendices accompany this report, providing various reference and citation data, including results from the objective data analyses.

Booz Allen wrote this report and the conclusions stated within represent our professional expertise and judgment based on the evidence collected as part of the evaluation.

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2. DoC DEMONSTRATION PROJECT AND ITS EVALUATION

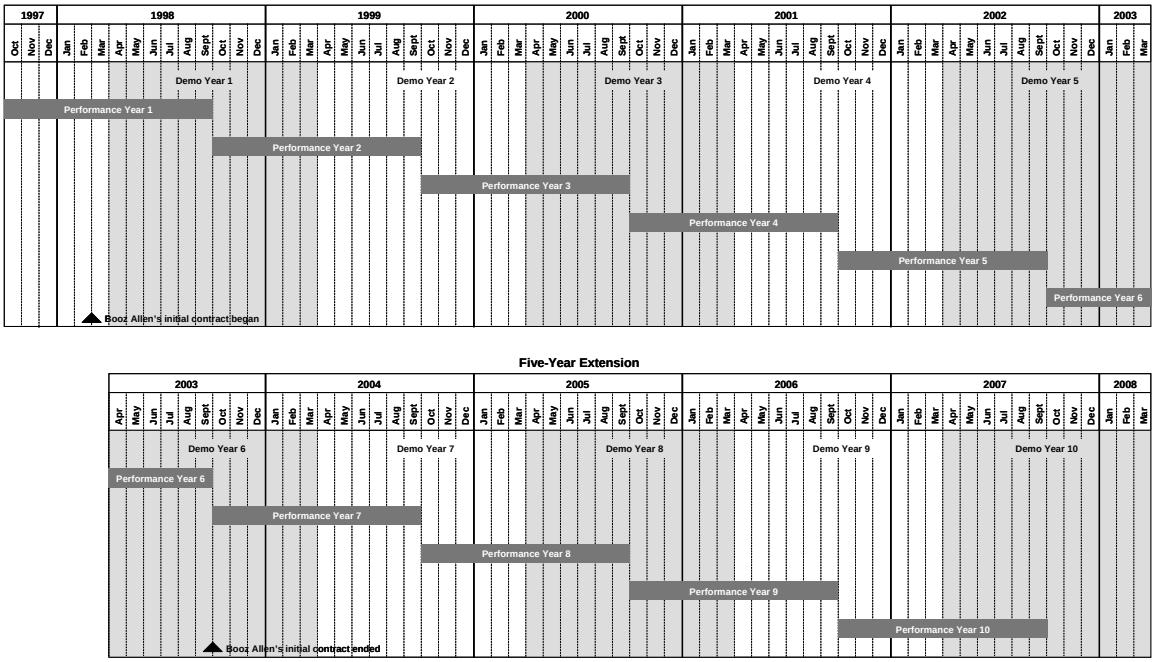
This chapter, which follows the same format as earlier reports with only minor revisions, presents background information concerning the Demonstration Project, including its objectives, scope, and evaluation. In addition, it provides information on the expansion and extension of the Demonstration Project.

2.1. The Demonstration Project is being conducted to test the effects of innovative human resources practices in different organizations with a variety of occupational groups

The original DoC Personnel Management Demonstration Project began on March 29, 1998, and was scheduled to last five years (March 2003) as shown in the first half of Figure 2-1. It was designed to apply several of the human resource interventions from an earlier DoC Demonstration Project at the National Institute of Standards and Technology (NIST). The NIST Project achieved highly successful results and, at its conclusion, the interventions were made permanent. The original Demonstration Project sought to build on the success of the NIST Project and determine whether or not these interventions can be successfully implemented within DoC to a wider range of occupational areas and within organizations with different missions. With some exceptions, the interventions that comprised the original Demonstration Project were similar to the interventions made permanent at NIST. Included as part of this Demonstration Project were simplified recruiting, classification, and examining processes, as well as a shift to a pay for performance system within a pay-banding framework.

In 2003, the Demonstration Project was extended for an additional five years, through March 2008, to enhance the evaluation of the interventions introduced under the original Demonstration Project. The new timeline for the Demonstration Project can be seen in Figure 2-1. In 2003, it was also decided to expand the Demonstration Project to allow additional organizations to participate. The mission and objectives of Years Six-Ten of the Demonstration Project remain the same as in Years One-Five.

Figure 2-1. DoC Personnel Management Demonstration Project Timeline



2.2. The general objectives of this Demonstration Project emphasize the development of a higher performing workforce, as well as greater efficiency and flexibility of personnel processes

This Demonstration Project is designed to foster improved organizational and individual performance. This is to be done by recognizing high quality performance and recruiting and retaining high performers. The stated project objectives are:

- Increased quality of new hires
- Improved fit between position requirements and individual qualifications
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- More efficient human resources management
- Increased delegation of authority and accountability to managers
- Better human resources systems to facilitate organizational mission and excellence
- Continued support for EEO/diversity goals[5] in recruiting, rewarding, and retaining minorities, women, and veterans
- Continued provision of opportunities for a diverse workforce
- Maximization of the contributions of all employees.

5 *Here and elsewhere in this document, the reference to "support for EEO/diversity goals" pertains to the desire to build and maintain a workforce that draws on the strength of America's diversity; it does not pertain to specific numeric targets.*

2.3. The Demonstration Project includes DoC organizations with a wide range of missions and occupations

The Demonstration Project is designed to include other organizations within DoC where the personnel interventions adopted at NIST might prove successful. DoC originally selected a number of DoC organizations, with a range of missions and occupational groups, to participate in the current Demonstration Project. Some of these organizations (collectively referred to as the Demonstration Group) received the new personnel interventions. In an effort to determine whether Demonstration Project changes were actually effective, the results obtained from the Demonstration Group are compared with those results from a Comparison Group (a group of DoC organizations that did not receive the interventions implemented in the Demonstration Group but were chosen because of their approximate similarity to the organizations in the Demonstration Group).

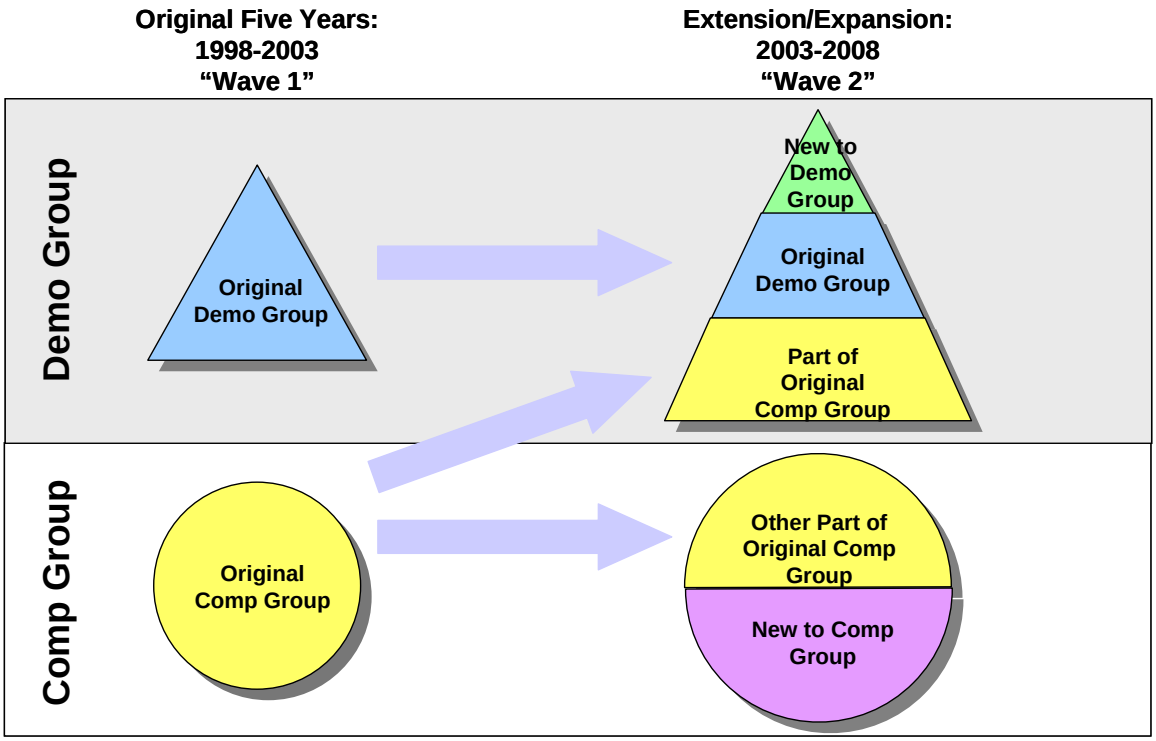
In 2003, DoC extended the Demonstration Project for an additional five years and also expanded it to include additional members, some representing organizations new to the Demonstration Project. As displayed in Figure 2-2, in the initial five years of the Demonstration Project, participants fell into one of two groups: the Demonstration Group (who experienced the tested alternative personnel interventions) and the Comparison Group (who did not). With the extension and expansion, there are essentially five subsets of participants in the Demonstration Group and Comparison Group. The Demonstration Group is comprised of:

- Participants whose organizations were new to the Demonstration Project in Years Six-Ten and were added to the Demonstration Group (hereafter, referred to as "New Demo," as needed, and included in "Demo Group Wave 2")
- Participants whose organizations were in the original Demonstration Group (i.e., Years One-Five) and who remained in the Demonstration Group in Years Six-Ten (hereafter, referred to as "Original Demo," as needed, and included in "Demo Group Wave 1")
- Participants whose organizations were in the original Comparison Group in Years One-Five and who were transferred to the Demonstration Group for Years Six-Ten (hereafter, referred to as "Comp to Demo," as needed, and included in "Demo Group Wave 2").

The Comparison Group is comprised of:

- Participants whose organizations were in the original Comparison Group (i.e., Years One-Five) and who remained in the Comparison Group in Years Six-Ten (hereafter, referred to as "Original Comp")
- Participants whose organizations were new to the Demonstration Project in Years Six-Ten and were added to the Comparison Group (hereafter, referred to as "New Comp").

Figure 2-2. Expansion and Extension of the Demonstration Project



Note: graphic is conceptual and therefore does not depict accurate proportionality of groups

The reference to "waves" in these definitions addresses the fact that the expansion changed the composition of the Demonstration Group, to include both individuals who have been in the Demonstration Project for five years (Wave 1) and those who are new to it (Wave 2). Therefore, it is important to consider that they may have different experiences. For this reason, as appropriate, some analyses that are conducted on Demonstration Group data will also be then broken out by Wave 1 and Wave 2. This will provide a means of looking at both the shorter term and longer term impact of the interventions.

2.3.1. The Demonstration Group now consists of nine organizations encompassing occupations in business, management, finance, economics, computer science, statistics, physical science, and natural science

In Year Eight, the Demonstration Group consisted of nine organizations encompassing a wide range of occupations. With the 2003 expansion, two new organizations – National Oceanic and Atmospheric Administration's (NOAA) Program Planning and Integration Office (PPI) and six offices within the Office of the Chief Financial Officer and Assistant Secretary for Administration (CFO/ASA) – had been added to the Demonstration Group (as well as the addition and reorganization of members in some of the original seven organizations). Table 2–1 presents the organizations participating in the Demonstration Group, along with their mission statements. The two organizations that were new as of 2003 (Wave 2) to the Demonstration Group are identified as such in the table.

Table 2–1. Participating Demonstration Group Organizations and Their Missions

Organization	Mission
Technology Administration (TA)	TA works to maximize technology's contribution to America's economic growth.
• Office of the Under Secretary	• The Office of the Under Secretary is responsible for the management of TA agencies.
• Office of Technology Policy (OTP)	• OTP is the only office in the Federal government with the explicit mission of developing and advocating national policies that use technology to build America's economic strength.
Economics and Statistics Administration (ESA)	Much of the statistical, economic, and demographic information collected by the Federal government is made available to the public through the bureaus and offices of ESA.
• Bureau of Economic Analysis (BEA)	• BEA is the nation's accountant, integrating and interpreting a tremendous volume of data to draw a complete and consistent picture of the U.S. economy. BEA's economic accounts—national, regional, and international—provide information on such key issues as economic growth, regional development, and the nation's position in the world economy.
National Telecommunications and Information Administration (NTIA)	NTIA is the Executive Branch's principal voice on domestic and international telecommunications and information technology issues. NTIA works to spur innovation, encourage competition, help create jobs, and provide consumers with more choices and better quality telecommunications products and services at lower prices. In fulfilling this responsibility, NTIA is providing greater access for all Americans, championing greater foreign market access, and creating new opportunities with technology.
• Institute for Telecommunication Sciences (ITS)	• ITS is the chief research and engineering arm of NTIA. ITS supports such NTIA telecommunications objectives as promotion of advanced telecommunications and information infrastructure development in the U.S., enhancement of domestic competitiveness, improvement of foreign trade opportunities for U.S. telecommunications firms, and facilitation of more efficient and effective use of the radio spectrum.
National Oceanic and Atmospheric Administration (NOAA)	NOAA's mission is to describe and predict changes in the earth's environment and to conserve and manage wisely the nation's coastal and marine resources.
• Units of the Office of Oceanic and Atmospheric Research (OAR)	• OAR, the primary research arm of NOAA, conducts and directs research in atmospheric, coastal, marine, and space sciences through its own laboratories and programs, and through networks of university-based programs.
• Units of the National Environmental Satellite, Data, and Information Service (NESDIS)	• NESDIS operates NOAA's satellites and ground facilities; collects, processes and distributes remotely sensed data; conducts studies, plans new systems, and carries out the engineering required to develop and implement new or modified satellite systems; carries out research and development on satellite products and services; provides ocean data management and services to researchers and other users; and acquires, stores, and disseminates worldwide data related to solid earth geophysics, solar terrestrial physics, and marine geology and geophysics.
• Units of the National Marine Fisheries Service (NMFS)	• NMFS administers NOAA's programs, which support the domestic and international conservation and management of living marine resources. NMFS provides services and products to support domestic and international fisheries management operations, fisheries development, trade and industry assistance activities, law enforcement, protected species and habitat conservation operations, and the scientific and technical aspects of NOAA's marine fisheries program.

Table 2–1. Participating Demonstration Group Organizations and Their Missions

Organization	Mission
• Unit of the National Weather Service (NWS)	• NWS' Space Environment Center is one of the nine National Centers for Environmental Prediction and provides real-time monitoring and forecasting of solar and geophysical events, conducts research in solar-terrestrial physics, and develops techniques for forecasting solar and geophysical disturbances.
• Program Planning and Integration Office (PPI) – New in Wave 2	• PPI is responsible for developing and maintaining NOAA's strategic plan. In addition, PPI manages various programs under a matrix management system and promotes the integration of human capital, resources and capacity across NOAA in support of developing effective programs.
DoC Headquarters • Units of the Chief Financial Officer and Assistant Secretary for Administration (CFO/ASA) – New in Wave 2	• The CFO/ASA establishes and monitors DoC policies and procedures for administrative functions, including a range of financial and human resources. This CFO/ASA is also responsible for coordinating reform initiatives called for by the President's Management Agenda, including improving financial management, strategic management of human capital, competitive sourcing, budget and performance integration, and expanding electronic government. The CFO/ASA is also charged with managing the DoC's headquarters facilities. Six of the nine offices within the CFO/ASA are participating in the Demonstration Project: Office of Human Resources Management, Office of Administrative Services, Office of Financial Management, Office of Acquisition Management, Office of Management and Organization, and Office of Security.

Table 2–2 shows an updated list of the major locations and occupations of the employees now included in the Demonstration Group. Locations that are new to the Demonstration Project are marked with an asterisk (*). Locations that switched from the Comparison Group to the Demonstration Group are marked with two asterisks (**).

Table 2–2. Major Locations and Occupations in the Demonstration Group

Organization	Major Location(s)	Major Occupation(s)
TA • Office of the Under Secretary • Office of Technology Policy (OTP)	Washington, DC	General Administration, Management Analyst, and Technology Policy Analyst
ESA • Bureau of Economic Analysis (BEA)	Washington, DC	Economist, Accountant, Financial Administrator, Computer Specialist, Statistician, and Statistical Assistant
NTIA • Institute for Telecommunication Sciences (ITS)	Boulder, CO	Electronics Engineer, Mathematician, Computer Scientist, and Engineering Technician
NOAA • Office of Oceanic and Atmospheric Research (OAR)	Silver Spring, MD, Boulder, CO, Miami, FL, Princeton, NJ**	Meteorologist, Physical Scientist, Physicist, Electronics Engineer, Computer Specialist, Electronics Technician, Physical Science Technician, and Mathematician

Table 2–2. Major Locations and Occupations in the Demonstration Group

Organization	Major Location(s)	Major Occupation(s)
• National Environmental Satellite, Data, and Information Service (NESDIS)	Suitland, MD, Silver Spring, MD, Asheville, NC, Boulder, CO, Camp Springs, MD, Wallops Island, VA**	Physical Scientist, Meteorologist, Computer Specialist, Oceanographer, Physical Science Technician, Electronics Engineer, Engineering Technician, Geophysicist, and Mathematician
• National Marine Fisheries Service (NMFS)	Gloucester, MA, Long Beach, CA, Juneau, AK, Silver Spring, MD, Seattle, WA, Honolulu, HI*, Woods Hole, MA**, Narragansett, RI*, Milford, CT*, Sandy Hook, NJ*, Washington, DC*, St. Petersburg, FL*,Miami, FL**, Panama City, FL*, Pascagoula, MS*, Bay St. Louis, MS*,Galveston, TX*, La Jolla, CA**, Santa Cruz, CA*, Pacific Grove, CA*, Newport, OR*, Hammond, OR*, Manchester, WA*, Pasco, WA*, Mukilteo, WA*	Fish Biologist, Fish Administrator, Biologist, Microbiologist, Biology Technician, Chemist, Oceanographer, Wildlife Biologist, Computer Specialist, and General Business Specialist
• National Weather Service (NWS)	Boulder, CO	Meteorologist
• Program Planning and Integration Office (PPI)	Silver Spring, MD*	Policy and Program Analyst, Oceanographer, Policy Analyst, Secretary, Program Support Specialist, Budget Analyst, Management and Program Analyst, Environmental Protection Specialist
DoC HEADQUARTERS • Units of the Office of the Chief Financial Officer and Assistant Secretary for Administration (CFO/ASA)	Washington, DC*	Security Specialist, Human Resources Specialist/Assistant, Program/Management Analyst, Accountant, Budget Analyst, Contract/Procurement Specialist

2.3.2. The Comparison Group consists of members of five organizations that are reasonably similar to the organizations in the Demonstration Group

In order to separate the impacts of the interventions from other influences, DoC identified a set of DoC organizations to be included in the original Demonstration Project as a Comparison Group. The Comparison Group organizations did not receive the interventions implemented in the Demonstration Group and were chosen because of their approximate similarity to the organizations in the Demonstration Group. The purpose of the Comparison Group is to serve as a point of comparison when analyzing the impact of interventions on the Demonstration Group. If differences are seen between Demonstration and Comparison Groups, then the assumption that the interventions have made an impact can be made more confidently.

With expansion of the Demonstration Project in 2003, several groups from the original Comparison Group moved into the Demonstration Group, and one organization was added to the Comparison Group (i.e., the National Ocean Service). Table 2–3 presents the Comparison Group organizations as of Year Eight, along with their major locations and major occupations. The one organization that were new as of 2003 (Wave 2) to the Comparison Group is identified as such in the table.

Table 2–3. Major Locations and Occupations in the Comparison Group

Organization	Major Location(s)	Major Occupation(s)
ESA		
• Headquarters	Washington, DC	General Administration
NOAA		
• Office of Oceanic and Atmospheric Research (OAR)	Ann Arbor, MI, Seattle, WA	Meteorologist (primary), Physical Scientist, Physicist, Electronics Engineer, Computer Specialist, Electronics Technician, Physical Science Technician, and Mathematician
• National Environmental Satellite, Data, and Information Service (NESDIS)	Wallops Island, VA	Physical Scientist, Meteorologist, Computer Specialist, Oceanographer, Physical Science Technician, Electronics Engineer, Engineering Technician, Geophysicist, and Mathematician
• National Marine Fisheries Service (NMFS)	Miami, FL, Seattle, WA	Fish Biologist, Biologist, Microbiologist, Biology Technician (primary), Chemist, Oceanographer, Wildlife Biologist, Computer Specialist, and General Business Specialist
• National Ocean Service (NOS) – New in Wave 2	Silver Spring, MD Seattle, WA Charleston, SC	Cartographer, Geodesist, Physical Scientist, Oceanographer, Cartographic Technician, Physical Science Technician, Geodetic Technician, various administrative positions

2.4. The Demonstration Project encompasses 6,774 employees in both the Demonstration and Comparison Groups

All positions that would be classified as General Schedule (GS) or GM positions are covered under the Demonstration Project. Positions that are classified as Senior Executive Service (SES) or Federal Wage System (FWS) are not covered.

, Table 2–5, Table 2–6, and Table 2–77 provide information on the participants in the Demonstration Project in Year Eight, including the number of participants and basic demographic data, such as career path, pay band, race/national origin, veteran status, gender, and supervisory status. One table each is used to characterize the Demonstration Group overall, Demonstration Group – Wave 1 only, Demonstration Group – Wave 2 only, and the Comparison Group.

There was a total of 6,774 participants in the Demonstration Project: 4,650 Demonstration Group participants and 2,124 Comparison Group participants. (Of the 4,650 Demonstration Group participants, 3,210 are categorized as Wave 1 and 1,440 are categorized as Wave 2).

These demographic data illustrate the general similarity in the demographic characteristics of participants in the Demonstration and Comparison Groups, which is important for establishing the validity of the Comparison Group used in this evaluation. There are some minor differences between the groups; these will be addressed in the report in any cases where the differences between the Demonstration and Comparison Groups may be impacting how findings are interpreted.

Table 2–4. Characteristics of Demonstration Group Participants by Agency – Overall

	ESA-BEA		NTIA		NOAA-NESDIS		NOAA-NMFS		NOAA-OAR		NOAA-NWS		NOAA-PPI		CFO/ASA		TA		TOTALS	
#	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Participants	550	12%	86	2%	806	17%	1980	43%	712	15%	45	1%	13	0%	433	9%	25	1%	4650	100%
Career Path (or the equivalent)																				
ZA	117	21%	5	6%	123	15%	388	20%	119	17%	3	7%	8	62%	311	72%	21	84%	1095	24%
ZP	393	71%	56	65%	485	60%	1290	65%	475	67%	39	87%	4	31%	33	8%	-	-	2775	60%
ZS	32	6%	9	10%	83	10%	227	11%	70	10%	3	7%	1	8%	89	21%	4	16%	518	11%
ZT	8	1%	16	19%	115	14%	75	4%	48	7%	-	-	-	-	-	-	-	-	262	6%
Pay Band (or the equivalent)																				
1	17	3%	13	15%	11	1%	35	2%	13	2%	-	-	-	-	-	-	-	-	89	2%
2	99	18%	8	9%	55	7%	304	15%	55	8%	10	22%	-	-	34	8%	-	-	565	12%
3	217	39%	26	30%	214	27%	779	39%	178	25%	7	16%	3	23%	122	28%	5	20%	1551	33%
4	169	31%	32	37%	422	52%	703	36%	360	51%	23	51%	8	62%	215	50%	9	36%	1941	42%
5	48	9%	7	8%	104	13%	159	8%	106	15%	5	11%	2	15%	62	14%	11	44%	504	11%
Race/National Origin																				
Amer. Indian	-	-	1	1%	-	-	11	1%	5	1%	1	2%	-	-	1	0%	-	-	19	0%
Asian	52	9%	5	6%	40	5%	116	6%	41	6%	1	2%	-	-	17	4%	2	8%	274	6%
Black	120	22%	1	1%	138	17%	116	6%	54	8%	-	-	2	15%	179	41%	6	24%	616	13%
Hispanic	19	3%	2	2%	15	2%	53	3%	35	5%	1	2%	-	-	17	4%	1	4%	143	3%
White	359	65%	77	90%	613	76%	1684	85%	577	81%	42	93%	11	85%	219	51%	16	64%	3598	77%
Veteran																				
Yes	37	7%	6	7%	158	20%	184	9%	71	10%	9	20%	1	8%	95	22%	2	8%	563	12%
No	513	93%	80	93%	648	80%	1796	91%	641	90%	36	80%	12	92%	338	78%	23	92%	4087	88%
Gender																				
Male	300	55%	62	72%	510	63%	1106	56%	466	65%	29	64%	5	38%	177	41%	7	28%	2662	57%
Female	250	45%	24	28%	296	37%	874	44%	246	35%	16	36%	8	62%	256	59%	18	72%	1988	43%
Supervisor																				
Yes	68	12%	4	5%	95	12%	329	17%	68	10%	4	9%	-	-	61	14%	2	8%	631	14%
No	481	87%	82	95%	711	88%	1651	83%	644	90%	41	91%	13	100%	371	86%	23	92%	4017	86%

Notes:

1. *Percentages may not add to 100 due to rounding.*
2. *Supervisor data is reported for the 4,648 of the 4,650 participants for whom supervisor data were available.*
3. *These figures are based upon the objective data provided by DoC (as of March 31, 2006) and represent the composition of the Demonstration Group during Year Eight.*

Table 2–5. Characteristics of Demonstration Group Participants by Agency – Wave 1

	DEMONSTRATION GROUP – WAVE 1															
	ORIGINAL DEMO (groups that started in the Demo Group in March 1998 and remain in the Demo Group)														TOTALS	
	ESA-BEA		NTIA		NOAA-NESDIS		NOAA-NMFS		NOAA-OAR		NOAA-NWS		TA			
# Partici-	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
pants	550	17%	86	3%	782	24%	1093	34%	629	20%	45	1%	25	1%	3210	100%
Career Path (or the equivalent)																
ZA	117	21%	5	6%	121	16%	289	26%	112	18%	3	7%	21	84%	668	21%
ZP	393	72%	56	65%	466	60%	645	59%	420	67%	39	87%	-	-	2019	63%
ZS	32	6%	9	11%	81	10%	148	14%	61	10%	3	7%	4	16%	338	11%
ZT	8	2%	16	19%	114	15%	11	1%	36	6%	-	-	-	-	185	6%
Pay Band (or the equivalent)																
1	17	3%	13	15%	11	1%	21	2%	12	2%	-	-	-	-	74	2%
2	99	18%	8	9%	55	7%	165	15%	43	7%	10	22%	-	-	380	12%
3	217	40%	26	30%	199	25%	426	39%	157	25%	7	16%	5	20%	1037	32%
4	169	31%	32	37%	414	53%	388	36%	319	51%	23	51%	9	36%	1354	42%
5	48	9%	7	8%	103	13%	93	9%	98	16%	5	11%	11	44%	365	11%
Race/National Origin																
Amer. Indian	-	-	1	1%	-	-	8	1%	5	1%	1	2%	-	-	15	1%
Asian	52	10%	5	6%	40	5%	52	5%	36	6%	1	2%	2	8%	188	6%
Black	120	22%	1	1%	136	17%	73	7%	50	8%	-	-	6	24%	386	12%
Hispanic	19	4%	2	2%	15	2%	29	3%	34	5%	1	2%	1	4%	101	3%
White	359	65%	77	90%	591	76%	931	85%	504	80%	42	93%	16	64%	2520	79%
Veteran																
Yes	37	7%	6	7%	148	19%	98	9%	66	11%	9	20%	2	8%	366	11%
No	513	93%	80	93%	634	81%	995	91%	563	90%	36	80%	23	92%	2844	89%
Gender																
Male	300	55%	62	72%	489	63%	560	51%	396	63%	29	64%	7	28%	1843	57%
Female	250	46%	24	28%	293	38%	533	49%	233	37%	16	36%	18	72%	1367	43%
Supervisor																
Yes	68	12%	4	5%	84	11%	131	12%	60	10%	4	9%	2	8%	353	11%
No	481	88%	82	95%	698	89%	962	88%	569	91%	41	91%	23	92%	2856	89%

Notes:

1. *Percentages may not add to 100 due to rounding.*
2. *Supervisor data is reported for the 3,209 of the 3,210 participants for whom supervisor data were available.*
3. *These figures are based upon the objective data provided by DoC (as of March 31, 2006) and represent the composition of the Demonstration Group during Year Eight.*

Table 2–6. Characteristics of Demonstration Group Participants by Agency – Wave 2

	DEMONSTRATION GROUP – WAVE 2													
	COMP TO DEMO (groups that started in the Comp Group in March 1998 and transferred to the Demo Group in October 2003)						NEW DEMO (groups that started in the Demo Group in October 2003)						TOTALS	
	NOAA-NESDIS		NOAA-NMFS		NOAA-OAR		NOAA-NMFS		NOAA-PPI		CFO/ASA			
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
# Participants	24	2%	860	60%	83	6%	27	2%	13	1%	433	30%	1440	100%
Career Path (or the equivalent)														
ZA	2	8%	95	11%	7	8%	4	15%	8	62%	311	72%	427	30%
ZP	19	79%	631	73%	55	66%	14	52%	4	31%	33	8%	756	53%
ZS	2	8%	70	8%	9	11%	9	33%	1	8%	89	21%	180	13%
ZT	1	4%	64	7%	12	15%	-	-	-	-	-	-	77	5%
Pay Band (or the equivalent)														
1	-	-	11	1%	1	1%	3	11%	-	-	-	-	15	1%
2	-	-	135	16%	12	15%	4	15%	-	-	34	8%	185	13%
3	15	63%	352	41%	21	25%	1	4%	3	23%	122	28%	514	36%
4	8	33%	303	35%	41	49%	12	44%	8	62%	215	50%	587	41%
5	1	4%	59	7%	8	10%	7	26%	2	15%	62	14%	139	10%
Race/National Origin														
Amer. Indian	-	-	2	0%	-	-	1	4%	-	-	1	0%	4	0%
Asian	-	-	64	7%	5	6%	-	-	-	-	17	4%	86	6%
Black	2	8%	38	4%	4	5%	5	19%	2	15%	179	41%	230	16%
Hispanic	-	-	22	3%	1	1%	2	7%	-	-	17	4%	42	3%
White	22	92%	734	85%	73	88%	19	70%	11	85%	219	51%	1078	75%
Veteran														
Yes	10	42%	80	9%	5	6%	6	22%	1	8%	95	22%	197	14%
No	14	58%	780	91%	78	94%	21	78%	12	92%	338	78%	1243	86%
Gender														
Male	21	88%	532	62%	70	84%	14	52%	5	39%	177	41%	819	57%
Female	3	13%	328	38%	13	16%	13	48%	8	62%	256	59%	621	43%
Supervisor														
Yes	11	46%	180	21%	8	10%	18	67%	-	-	61	14%	278	19%
No	13	54%	680	79%	75	90%	9	33%	13	100%	371	86%	1161	81%

Notes:

1. *Percentages may not add to 100 due to rounding.*
2. *Supervisor data is reported for the 1,439 of the 1,440 participants for whom supervisor data were available.*
3. *These figures are based upon the objective data provided by DoC (as of March 31, 2006) and represent the composition of the Demonstration Group during Year Eight.*

Table 2–7. Characteristics of Comparison Group Participants by Agency

	COMPARISON GROUP											
	ORIGINAL COMP (groups that started in March 1998 and remain in the Comp Group)								NEW COMP (groups that started in the Comp Group in October 2003)		TOTALS	
	HQ ESA		NOAA-NESDIS		NOAA-NMF		NOAA-OAR		NOAA-NOS			
	#	%	#	%	#	%	#	%	#	%	#	%
# Participants	33	2%	56	3%	672	32%	142	7%	1221	58%	2124	100%
Career Path (or the equivalent)												
ZA	12	36%	2	4%	60	9%	20	14%	347	28%	441	21%
ZP	18	55%	9	16%	529	79%	97	68%	689	56%	1342	63%
ZS	3	9%	5	9%	39	6%	10	7%	83	7%	140	7%
ZT	-	-	40	71%	44	7%	15	11%	102	8%	201	10%
Pay Band (or the equivalent)												
1	-	-	-	-	11	2%	2	1%	8	1%	21	1%
2	1	3%	2	4%	159	24%	7	5%	129	11%	298	14%
3	5	15%	14	25%	370	55%	58	41%	421	35%	868	41%
4	16	49%	40	71%	130	19%	52	37%	581	48%	819	39%
5	11	33%	-	-	2	0%	23	16%	82	7%	118	6%
Race/National Origin												
American Indian	-	-	2	4%	5	1%	1	1%	6	1%	14	1%
Asian	4	12%	1	2%	37	6%	7	5%	47	4%	96	5%
Black	11	33%	5	9%	14	2%	3	2%	142	12%	175	8%
Hispanic	3	9%	1	2%	20	3%	3	2%	14	1%	41	2%
White	15	46%	47	84%	596	89%	128	90%	1012	83%	1798	85%
Veteran												
Yes	-	-	28	50%	63	9%	15	11%	116	10%	222	11%
No	33	100%	28	50%	609	91%	127	89%	1105	91%	1902	90%
Gender												
Male	13	39%	48	86%	397	59%	97	68%	720	59%	1275	60%
Female	20	61%	8	14%	275	41%	45	32%	501	41%	849	40%
Supervisor												
Yes	3	9%	1	2%	-	-	14	10%	118	10%	136	6%
No	30	91%	55	98%	672	100%	128	90%	1103	90%	1988	94%

Notes:

1. Percentages may not add to 100 due to rounding.

2. These figures are based upon the objective data provided by DoC (as of March 31, 2006) and represent the composition of the Demonstration Group during Year Eight.

2.5. A broad range of interventions has been implemented under the Demonstration Project

The interventions implemented in the Demonstration Group focus on classification, pay, recruitment, retention, and an expanded probationary period. The fifteen interventions, listed below, are described in the following sections. Appendix A-1 displays the *Federal Register* notice on the Demonstration Project and its interventions (and Appendices A-2, A-3, A-4, and A-5 display modifications to the *Federal Register* notice).

1. Career paths
2. Pay bands (Broadbanding), in conjunction with flexible entry salaries
3. Performance-based pay increases (pay for performance)
4. Supervisory performance pay
5. More flexible pay increase upon promotion
6. Performance bonuses
7. Direct examination
8. Delegated examining authority[6]
9. More flexible paid advertising
10. Local authority for recruitment payments
11. Local authority for retention payments
12. Automated broadband classification system
13. Delegated classification authority to managers
14. Delegated pay authority to managers
15. Three-year probationary period for scientists and engineers (ZP employees performing research and development (R&D) activities).

2.5.1. Four career paths have been established that group occupations according to similar career patterns

Under the Demonstration Project, Demonstration Group occupations have been grouped into four broad career paths. Each career path consists of occupations that have similar career patterns and, therefore, can be treated similarly for classification, pay, and other personnel purposes. In contrast, under the GS system, occupations are grouped by similarities in content. The career paths developed for the Demonstration Group are:

- **Scientific and Engineering (ZP)**. Consisting of professional technical positions in the physical, engineering, biological, mathematical, computer, and social science occupations; and student trainee positions in these fields.

- **Scientific and Engineering Technician (ZT)**. Consisting of positions that support scientific and engineering activities through the use of skills in electrical, mechanical, physical science, biological, mathematical, and computer fields; and student trainee positions in these fields.

6 This was originally referred to as "agency-based staffing" in the Demonstration Project.

- **Administrative (ZA)**. Consisting of positions in such fields as finance, procurement, human resources, program and management analysis, public information, and librarianship; and student trainee positions in these fields.

- **Support (ZS)**. Consisting of positions that provide administrative support, through the use of clerical, typing, secretarial, assistant, and other similar skills; and student trainee positions in these fields.

The career paths are intended to make classification simpler, more understandable, and provide increased flexibility to support organizational changes.

2.5.2. Pay bands are composed of one or more GS grades and allow for flexibility in pay setting

The change from the GS system to pay bands (broadbanding) is one of the major Demonstration Project interventions. The pay bands were created by collapsing the traditional GS salary grades (including locality rates) into five broad groups with much broader ranges (i.e., pay bands). Figure 2-3 shows the four career paths, their corresponding pay bands, and GS system equivalents. The maximum rate of a pay band is equivalent to step 10 of the highest GS grade used to create that band. Each career path collapses GS grades into bands differently (with the exception of ZP and ZA); therefore, the band ranges differ by career path. Only the ZP and ZA career paths have pay bands that correspond to the full spectrum of GS grades. One to six GS grades are consolidated into any given pay band, depending on the career path and level of the band.

Figure 2-3. Career Paths and Bands for Demonstration Group Participants

<table>
<tr><th>CAREER PATHS</th><th colspan="15">BANDS</th></tr>
<tr><td>Scientific and Engineering (ZP)</td><td colspan="4">I</td><td colspan="4">II</td><td colspan="2">III</td><td colspan="2">IV</td><td>V</td></tr>
<tr><td>Scientific and Engineering Technician (ZT)</td><td colspan="4">I</td><td colspan="4">II</td><td colspan="2">III</td><td colspan="2">IV</td><td>V</td><td></td></tr>
<tr><td>Administrative (ZA)</td><td colspan="4">I</td><td colspan="4">II</td><td colspan="2">III</td><td colspan="2">IV</td><td>V</td></tr>
<tr><td>Support (ZS)</td><td colspan="2">I</td><td colspan="2">II</td><td colspan="2">III</td><td colspan="2">IV</td><td colspan="2">V</td><td colspan="5"></td></tr>
<tr><td>GS Grades</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td></tr>
</table>

Pay bands are intended to add flexibility in pay setting for attracting job candidates and rewarding high performing employees. Pay bands were also put in place to provide larger, more flexible classification ranges, aiding in the delegation of classification and pay authority to line managers. Pay bands are also meant to facilitate the provision of performance incentives for employees, in that they give employees the opportunity to receive raises more quickly based on their performance.

Together, career paths and pay bands are intended to simplify classification and accelerate pay progression, as well as facilitate pay for performance.

2.5.3. Pay for performance is a system meant to link pay increases directly to performance, resulting in a more competitively paid, higher quality workforce

Another major intervention is the establishment of a pay for performance system. Pay for performance links pay raises directly to job performance. Under the Demonstration Project, three components were subsumed by pay for performance. The first component is the annual comparability increase (ACI), an adjustment to basic pay that is based on the annual general increase and locality pay approved by Congress and the President each year. The second component is an annual performance-based pay increase. Bonuses constitute the third component. Funds that were applied to within-grade increases, quality step increases, and promotions (from one grade to another when those grades are in the same band) are now being applied to performance-based pay increases. In contrast to the GS system, Demonstration Group participants are eligible for pay increases each year since there is no waiting period under the Demonstration Project.

Pay for performance is meant to govern employee progression through the pay bands. Pay for performance is, of course, meant to tie pay raises to performance, in contrast to the GS system, which ties pay raises mostly to tenure. Its goal is to give higher pay raises to those whose performance is high. Because of the flexibility that the bands allow, the performance-based pay raises can be, in theory, substantial. The pay for performance system, along with the pay bands, is meant to improve performance and retain high quality employees.

At the onset, DoC created an automated Performance Payout System (PPS) to manage the performance data, annual payout/ACI process, and pay table updates. This was later upgraded from a DOS-based to a web-based system. DoC began making improvements to the PPS, in Year Five, including improvements to the software and reports.

Implementation of the pay for performance system also included the implementation of a new performance appraisal system. It is important to note that NOAA units outside of the Demonstration Group have also adopted a new performance appraisal system, independent of the Demonstration Project. Table 2–8 outlines some of the major differences between the traditional, the new NOAA, and the Demonstration Project performance appraisal systems.

Table 2–8. Performance Appraisal Systems

TRADITIONAL SYSTEM (Comparison Group)	NEW NOAA SYSTEM (Comparison Group)	DEMO PROJECT SYSTEM (Demonstration Group)
• Individual performance plans	• Individual performance plans	• Individual performance plans
• Performance improvement plans	• Performance improvement plans	• Performance improvement plans
• 500-point system	• Two-tier system	• 100-point, two-tier system
• Critical and non-critical elements included	• Critical elements included; non-critical elements not included	• Critical elements included; non-critical elements not included

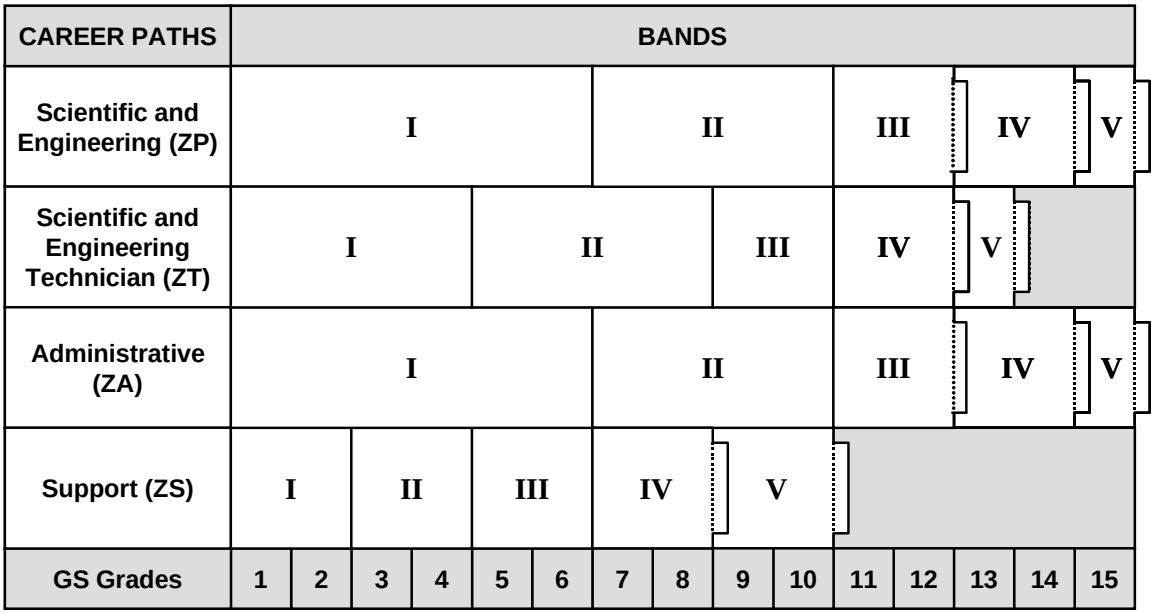
Each employee in the Demonstration Project has an individual performance plan that is composed of several critical performance elements. Under this performance appraisal system, all of the performance elements are critical; if an employee gets an unsatisfactory rating on one element, there is no performance score. These employees must be put on a performance improvement plan and given a chance to improve before a final rating is put on record. Employees deemed unsatisfactory are not eligible for pay for performance increases, bonuses, or annual adjustments to basic pay. Demonstration Group participants who are not performing unsatisfactorily on any of the performance elements are evaluated using the 100-point scoring system. Supervisors provide recommended scores to the Pay Pool Manager who arrays the data in score order to maintain the linkage between scores and pay actions.

In Year Three, an additional factor that may have impacted pay, but is not directly linked to performance, was a government-wide special pay rate for information technology (IT) employees. This action took effect on the first pay period that began on or after January 1, 2001, and applied to IT professionals in certain occupations at GS-5, 7, 9, 11, and 12. In addition to increasing the pay of IT workers in the Demonstration Project, this event may have favorably impacted the recruitment and retention of IT workers in the Demonstration Project, and elsewhere in the government.

2.5.4. Supervisory performance pay is meant to help retain supervisors by giving them higher pay potential for high supervisory performance

Supervisors in all career paths are eligible for supervisory performance pay when their salaries reach the maximum for their pay band. In each pay band that includes supervisory positions, there is a corresponding supervisory band (as shown in Figure 2-4). The supervisory bands have the same minimum levels as do the non-supervisory bands. The only difference is that the supervisory bands extend up to 6 percent above the maximum point of the corresponding non-supervisory band. The amount that a supervisor is paid above the maximum rate of his/her pay band constitutes supervisory performance pay. The range constituting supervisory performance pay (up to 6 percent above the maximum) can be reached only through pay for performance increases gained through the regular performance appraisal process. Supervisory performance pay is meant to give the ability to raise the pay of supervisors to more competitive levels, thus improving retention.

Figure 2-4. Pay Bands for Supervisory Employees



2.5.5. Flexible pay increases upon promotion are intended to allow supervisors to tie pay to employee performance and to substantially reward excellent performance

One intervention related to pay bands (broadbanding) and pay for performance is flexible pay increases upon promotion. High performing employees now have the potential to receive substantial pay increases when they are promoted. Because of the less restrictive nature of pay bands, an employee's salary, upon promotion, can be set anywhere within a band (and with a minimum increase of six percent) without being restricted by the small steps characteristic of the GS system. This intervention is meant to encourage the retention of high performers by making their salaries more competitive with the private sector.

2.5.6. Performance bonuses are payments meant to reward and encourage employee performance and improve retention

Performance bonuses are cash awards given following a performance appraisal cycle, in conjunction with performance pay decisions. Pay Pool Managers can award a bonus to any employee with an "eligible" performance rating (i.e., individuals who have a performance score of 40 or above). Pay Pool Managers make decisions based on supervisor recommendations and the amount in the bonus pool. The maximum bonus amount that can be given is $10,000 (greater amounts can be granted with the Departmental Personnel Management Board's approval as well as with OPM's review and approval, per 5 CFR 451.107). Bonuses are meant to reward high performers, increasing their retention. Bonuses are also meant to act as a performance incentive to the workforce.

Performance bonuses can also be awarded to DoC employees who entered the Demonstration Project too late to receive a performance rating, but who have received a DoC performance rating of record of at least "satisfactory" within the previous 13 months. In these situations, bonuses can be used to remove the disincentive of not receiving a pay increase. Performance bonuses can also be used as a tool to reward high performing employees who are pay capped.

2.5.7. For limited positions, direct examination allows DoC to hire candidates directly without using the normal ranking and selection procedures, thereby decreasing time to hire

Direct examination, a recruitment intervention, allows DoC to immediately hire candidates who present specific credentials, provided an open announcement exists. Direct examination can be used for shortage categories only. Direct examination gives managers the ability to hire individuals with shortage skills as they find them. Occupations covered by direct examination will usually be filled through direct recruiting by hiring officials. While direct examination can expedite the hiring process, a search of the operating unit applicant supply file is required, and veterans' preference must still be taken into account for these positions.

The Demonstration Project incorporates two direct examination authorities. The first is direct examination for critical shortage occupations and the second is direct examination for critical shortage highly qualified candidates. Direct examination for critical shortage occupations is used for occupations requiring skills in short supply. These include occupations for which there is a special rate under the GS system and some occupations at band three and above in the ZP career path. Direct examination for critical shortage highly qualified candidates is used for positions where there is a shortage of highly qualified candidates. An example of a critical shortage highly qualified candidate is a person qualified for band one or two of the ZP career path who has a:

- Bachelor's degree and at least a 2.9 GPA in a job-related major, or
- Master's degree in a job related field.

Since January 1996, all Federal government agencies have had direct examination authority. No critical shortage occupations have been identified under the Demonstration Project.

2.5.8. Delegated examining authority, which can be used for positions not covered by direct examination, gives DoC the ability to certify its own candidates; this is expected to decrease time to hire

Delegated examining authority, another recruitment intervention, is used to fill vacancies not covered by direct examination. At a minimum, positions eligible for delegated examining authority will be advertised through OPM's automated employment information system. Delegated examining authority gives DoC the ability to examine and certify its own candidates instead of having OPM certify them. It allows DoC to create its own candidate registers, and to rate and rank the candidates independent of OPM. Delegated examining authority, in conjunction with flexible paid advertising, was meant to be used to help hiring officials focus on more relevant recruiting sources and to accelerate the hiring process.

Since January 1996, all Federal government agencies have had delegated examining authority.

2.5.9. Flexible paid advertising allows DoC to use more specialized advertising sources to attract highly qualified candidates

Flexible paid advertising is an intervention that allows DoC to utilize paid advertising sources as a first step in recruiting, without having to utilize unpaid sources first. Hiring officials can now use a wider scope of advertising sources, as well as concentrate on more specialized sources. More flexible paid advertising is intended to allow hiring officials to make greater use of alternative and more relevant recruitment sources.

2.5.10. Local authority for recruitment payments allows DoC to grant payments for the purpose of recruiting high quality candidates

During the time period for which this evaluation was conducted, local authority for recruitment payments allowed operating units to independently grant recruitment payments in an amount not to exceed the greater of $10,000 or 25 percent of base pay. Recruitment payments could only be made to non-Federal applicants. Payments were based on market factors such as salary comparability, turnover rate, salary offer issues, relocation issues, programmatic urgency, special qualifications, shortage categories, or scarcity of positions. All scientific, engineering, and hard-to-fill positions were eligible. The main purpose for the recruitment payment was to increase the quality of the workforce by attracting high quality candidates.

This Demonstration Project modeled many of the features of the NIST Demonstration Project, which began in 1988, and thereby adopted "local authority for recruitment payments" as an intervention. However, under 5 U.S.C. 5753 recruitment incentives are also available elsewhere in the Federal government. The Title 5 recruitment incentive authority was significantly enhanced in May 2005 by the Federal Workforce Flexibility Act of 2004 (Public Law 108-411). Under this authority, recruitment incentives may be paid up to 25 percent of an employee's annual rate of basic pay times the number of years in the service agreement, not to exceed 4 years. On May 1, 2006, the Demonstration Project plan was modified to rescind its independent authority to pay recruitment payments (See 71 FR

25615.) DoC may now use the title 5 recruitment incentive authority under 5 U.S.C. 5753 and 5 CFR part 575, subpart A, for Demonstration Project employees.[7]

2.5.11. Local authority for retention payments allows DoC to grant payments for the purpose of retaining high quality candidates

Similar to local authority for recruitment payments, during the time period in which this evaluation was conducted, local authority for retention payments allowed operating units to grant retention payments not to exceed the greater of $10,000 or 25 percent of base pay. Retention payments could only be made to employees who are retiring or going to private industry. These payments also were based on market factors. All scientific, engineering, and hard-to-fill positions were eligible. The main purpose for the retention payments was to increase the quality of the workforce by retaining high quality performers who are retiring or are leaving for a position in private industry.

Under 5 U.S.C. 5754, other Federal agencies may pay retention incentives up to 25 percent of an employee's rate of basic pay. Similar to the recruitment payment intervention, while the current Demonstration Project modeled this intervention after the NIST Demonstration Project, retention payments are now also available elsewhere in the Federal government. The Title 5 retention incentive authority was significantly enhanced in May 2005 by the Federal Workforce Flexibility Act of 2004 (Public Law 108-411). On May 1, 2006, the Demonstration Project plan was modified to rescind its independent authority to pay retention payments (See 71 FR 25615.) DoC may now use the Title 5 retention incentive authority under 5 U.S.C. 5754 and 5 CFR part 575, subpart C, for Demonstration Project employees.[8]

2.5.12. The classification system was automated to make the classification process easier to use and more efficient

Under the Demonstration Project, the classification system has been automated. Position descriptions can be created, accessed, classified, and altered electronically. A DOS-based software program was originally built for these purposes. In Year Three, DoC transitioned to a web-based system to make the process more user-friendly. In Year Eight, the automated classification system (ACS) was fully web-based and was accessible to all supervisors. Specifically, supervisors can use the system to:

- Create a new position description
- Create a new position description based on another
- Delete a position description
- Edit an unofficial position description
- Print a position description

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7 At the time the Year Eight evaluation was conducted, changes made by the Federal Workforce Flexibility Act of 2004 was codified into 5 U.S.C. 5753, significantly enhancing the Title 5 recruitment incentive authority. The Demonstration Project plan was modified to rescind its independent authority to pay recruitment payments.

8 Similarly, at the time the Year Eight evaluation was conducted, changes made by the Federal Workforce Flexibility Act of 2004 was codified into 5 U.S.C. 5754. The Demonstration Project plan was modified to rescind its independent authority to pay retention payments.

- Review a position description
- Run queries
- Delete, edit, print, or view a position description by action number
- Export a position description
- Maintain the position description system.

The purpose of the automation is to make the classification system easier to use and more expedient. Automation of the system is also meant to minimize the resources needed for operation and to minimize the classification decisions that need to be made, creating efficiencies.

2.5.13. Delegated classification authority places classification responsibility with the managers

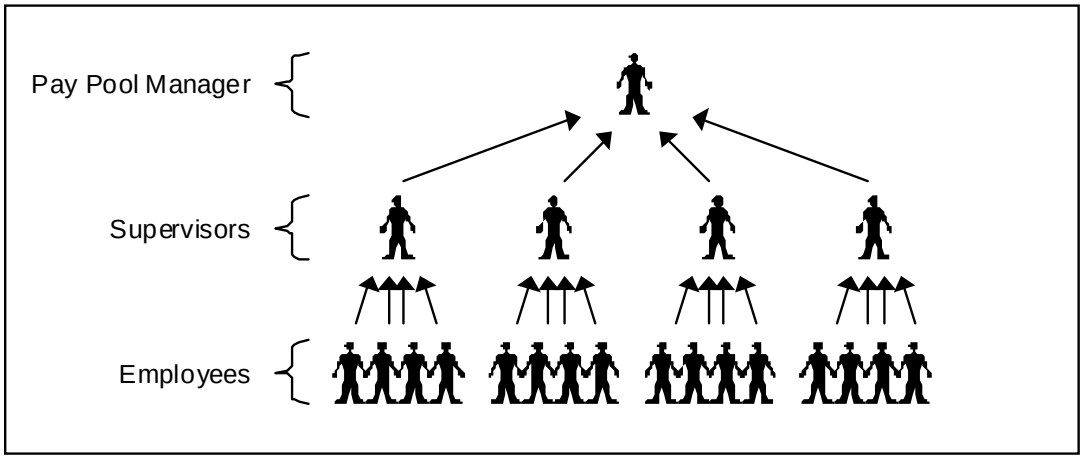
Delegated classification authority gives line managers the authority to classify positions. Each operating unit's Operating Personnel Management Board has the responsibility for overseeing the delegation of classification authority. Human resources staff has the responsibility to monitor and review classification decisions. Delegated classification authority is meant to give managers more control over classifying the work they supervise. Managers must understand their operating unit's mission and the work they supervise to be effective classifiers.

2.5.14. Delegated pay authority allows line managers to direct and administer pay functions

Delegated pay authority gives line managers the authority to direct and administer pay procedures. Under the GS system, Federal employees receive increases in salary in accordance with their grade and step. Under the Demonstration Project, supervisors evaluate the performance of their subordinates and communicate their recommendations to the Pay Pool Manager. Supervisors may also make recommendations for performance-based pay increases and/or bonuses. The Pay Pool Manager, however, makes the final decisions regarding the performance scores and dollar amounts for both performance-based pay increases and bonuses.

The purpose of delegated pay authority is to improve the effectiveness of human resources management by having line managers more involved as managers of the human resources in their units. Managers have a first hand view of employee performance and therefore can make the most effective pay recommendations. Line managers' involvement is increased significantly under the Demonstration Project because they now have responsibility and authority for managing pay and making pay decisions. Figure 2-5 displays the delegated pay authority relationship within the Demonstration Group. These newly delegated authorities are subject to oversight by the Operating Personnel Management Boards at the local level, and by the Departmental Personnel Management Board, which ensures adherence to Departmental policy and procedures.

Figure 2-5. Pay Authority Relationship



2.5.15. The three-year probationary period gives managers more of an opportunity to observe ZP employees performing R&D duties for the full R&D cycle

Under the three-year probationary period intervention, employees in the scientific and engineering (ZP) career path who perform research and development (R&D) work are subject to a three-year probationary period.[9] The intent is to allow a longer initial performance period for these employees (compared to the standard probationary period for other employees), given that the full lifecycle of R&D activities can span longer timeframes than other types of work.

With this intervention, managers have the authority to end the three-year probationary period of an R&D subordinate at any time after a year. Near the end of the first year of probation, a manager decides whether to 1) change the employee to non-probationary status, 2) remove the employee, or 3) keep the employee on probationary status. If the employee remains on probationary status, then the manager must choose between these three options near the end of the second year. If the employee remains on probation into the third year, then the manager must make a final decision on whether to remove or keep the employee.

2.6. A valid evaluation of the Demonstration Project is critical in determining whether to continue the tested interventions and whether to make them a part of other government organizations

All Demonstration Projects under 5 U.S.C. 47 must be evaluated, by statute, for the life of the project. OPM requires that every Demonstration Project be rigorously evaluated by an outside evaluator. The purpose of the DoC Demonstration Project evaluation is to determine if the Demonstration Project's objectives were met. The evaluation's purpose is also to determine what, if any, mid-course revisions should be made to the Demonstration Project implementation, and whether the project interventions can be applied in other Federal

9 *Other employees in the Demonstration Project serve the same one-year probationary period as employees throughout the government.*

government organizations. The Demonstration Project evaluation is driven by a number of research questions and uses a quasi-experimental, longitudinal research design.

2.6.1. The research questions for the Demonstration Project were derived from both the OPM Demonstration Projects Evaluation Handbook and the DoC Demonstration Project objectives

Evaluation of the Demonstration Project interventions seeks ultimately to answer several research questions. The OPM Demonstration Projects Evaluation Handbook (Batten, Goehrig, and Jorgenson, 1998) states that the research questions that must be answered will differ from project to project. However, six general research questions (presented in Table 2–9) must be answered for every Demonstration Project.

Table 2–9. Research Questions from OPM Demonstration Project Handbook

OPM Research Questions	Timing of Answer
1) Did the project accomplish the intended purpose and goals? If not, why not?	Years 3, 5, 7, 9, & 10
2) Was the project implemented and operated appropriately and accurately?	All Years
3) What was the cost of the project?	Year 5 and 10
4) What was the impact on veterans and other EEO groups?	All Years
5) Were Merit Systems Principles adhered to and Prohibited Personnel Practices avoided?	All Years
6) Can the project or portions thereof be generalized to other agencies or government-wide?	Year 5 and 10

In addition, research questions are based on six objectives specific to the DoC Demonstration Project. These objectives stem from major concerns within DoC with respect to hiring restrictions, a complex job classification system, and poor tools for rewarding and motivating employees. The Demonstration Project was implemented to address these types of issues. Accordingly, the evaluation also seeks to address the six additional research questions, specified in Table 2–10.

Table 2–10. Research Questions Related to DoC Demonstration Project Objectives

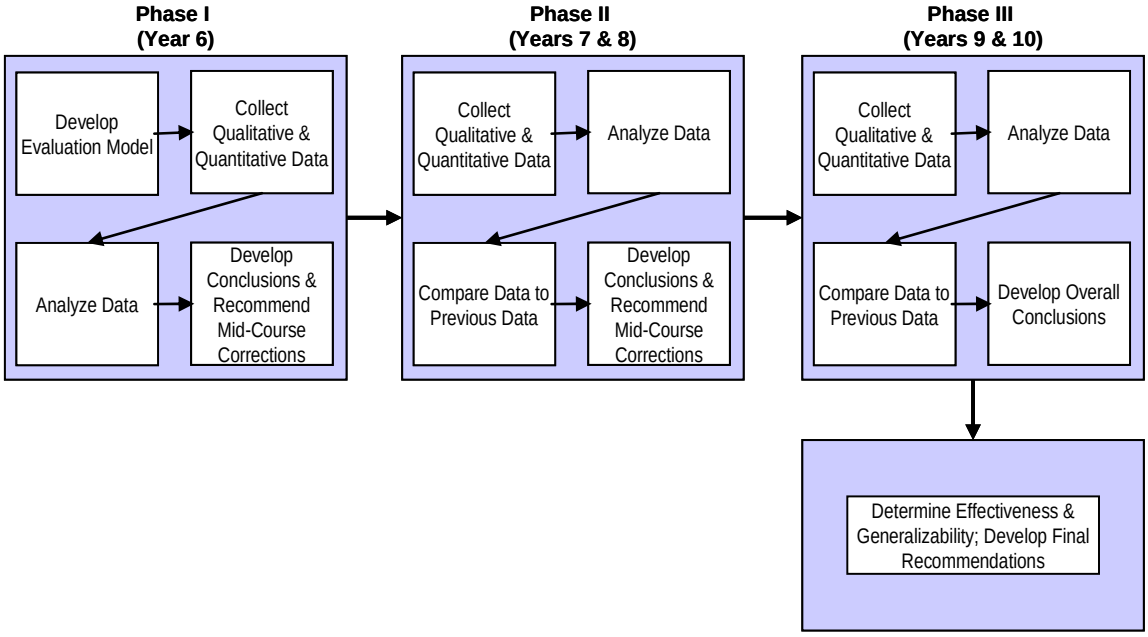
DoC-Specific Research Questions	Timing of Answer
1) Has the quality of new hires increased; has there been an improved fit between position requirements and individual qualifications; has there been a greater likelihood of getting a highly qualified candidate?	Years 3, 5, 7, 9, & 10
2) Has retention of good performers increased?	Years 3, 5, 7, 9, & 10
3) Has individual and organizational performance improved?	Years 3, 5, 7, 9, & 10
4) Is human resources management more effective?	Years 3, 5, 7, 9, & 10
5) Is human resources management more efficient?	Years 3, 5, 7, 9, & 10
6) Is there improved support for EEO/diversity goals in recruiting, rewarding, paying, and retaining minorities; are opportunities for a diverse workforce being provided; are the contributions of all employees being maximized?	All Years

The 12 research questions above were tracked during all phases of the Demonstration Project evaluation and are the ultimate questions to be answered by this evaluation.

2.6.2. The Demonstration Project evaluation is being conducted in three phases and compares a Demonstration Group to a Comparison Group, across time

A non-equivalent comparison group, quasi-experimental research design is being used to evaluate the Demonstration Project. Quasi-experimental design is used when it is not possible to control for all variables, or when it is not possible or practical to randomly assign subjects to equivalent groups. The non-equivalent comparison group design seeks to control for other factors that may have an impact by tracking a Comparison Group that is reasonably similar (though not necessarily identical) to the experimental (Demonstration) group. The DoC Demonstration Project evaluation is being conducted in three phases, shown in Figure 2-6, and will compare the Demonstration Group to the Comparison Group across time.

Figure 2-6. DoC Demonstration Project Evaluation Model Phase



In general, the three phases of the evaluation focus on project implementation and project effectiveness, but to varying degrees. The evaluation also serves to produce recommendations for mid-course corrections as the project progresses. The three phases differ slightly in their focus, but were designed to complement each other.

This Year Eight Report compares data across the life of the Demonstration Project. It presents data on the state of the Demonstration Project in Year Eight and also, importantly, provides trend analyses to examine changes that have occurred over time by examining data from Years One through Eight.

3. DATA COLLECTION AND ANALYSES

This assessment is based on an analysis of objective data obtained from the National Finance Center (NFC) Payroll/Personnel System and the Demonstration Project's Performance Payout System (PPS), as well as a review HR summary data. Each data collection source is described in detail below. The results of each Year Eight analysis are presented in Section 4. (Appendix B-1 presents the results of the analyses across the years.)

3.1. Booz Allen used objective personnel data to measure the impact of the Demonstration Project's interventions

Objective data analyses played the major role in the assessment. To maintain consistency, nearly the same data elements and data analyses were used as in past years.

3.1.1. Personnel data, including performance, compensation, and demographic data, were collected

For the Year Eight Report, Booz Allen collected and analyzed objective data contained in a data file provided by DoC, which relied upon data from the NFC's Payroll/ Personnel System. The personnel data pertained to performance, compensation, and demographics for the time period April 2005 to March 2006 for both the Demonstration Group and the Comparison Group. Table 3–1 shows the objective data elements that were included in the analyses.

Table 3–1. Objective Data Elements

Objective Data Elements	
• Gender • Race • Birth date • Veteran status • Education • Organization/Unit • Grade (Comparison Group) • Step (Comparison Group) • Hire date into DoC • Hire code • Date entered Demonstration Project (Demonstration Group) • Career path (or equivalent for Comparison Group) • Pay band (or equivalent for Comparison Group) • Interval (or equivalent for Comparison Group) • Supervisory status (supervisory employee/ non-supervisory employee) • Salary as of 9/30/05 (Demonstration Group) • Salary as of 11/30/05, after performance increases (Demonstration Group) • Salary as of 3/31/06, after ACI (Demonstration Group) • Salary as of 4/01/05 (Comparison Group) • Salary as of 3/31/06 (Comparison Group) • Performance-based bonus • Performance-based bonus date • Special act award • Special act award date • Other award • Other award date • Eligibility for performance score in Year Eight (Demonstration Group) • Eligibility for performance rating in Year Eight (Comparison Group) • Performance appraisal score (Demonstration Group) • Performance rating (Comparison Group)	• Intended performance-based pay increase percent • Actual performance-based pay increase percent • Percent received of total possible increase percent • Pay band maximum • Pay interval maximum • Step increase (Comparison Group) • Quality step increase (Comparison Group) • Increase for promotion to grade within band (Comparison Group) • Retention payment amount • Retention payment date • Recruitment payment amount • Recruitment payment date • Eligibility for 3-year probation • 3-year probation begin date • 3-year probation end date • Hired during or at end of 3-year probation • Promotion during Year Eight • Promotion amount • Promotion date • Career path after promotion (or equivalent for Comparison Group) • Pay band after promotion (or equivalent for Comparison Group) • Interval after promotion (or equivalent for Comparison Group) • New hire salary • Date of separation • Type of separation • Salary at separation • Switched career paths during Year Eight (or equivalent for Comparison Group) • Demonstration Project wave

3.1.2. Demonstration Group analyses are based on either the full set of 4,650 participants or the appropriate subset of participants, depending on the nature of the analyses

Where possible (e.g., analysis of turnover data, counts of new hires), the full dataset of 4,650 was used for analyses. However, some analyses required performance data and were therefore based on the 3,997 of the 4,650 Demonstration Group participants who were not only eligible for a performance score but also had available performance score data, pay increase percent data, and bonus increase percent data. These numbers are sufficiently large to provide for robust analyses.

In Year Eight, 626 of the 4,650 Demonstration Group participants were ineligible for performance ratings. This included individuals who were ineligible for performance ratings for a variety of reasons: people who were recently hired (or received pay adjustments within 120 days of the end of the performance cycle), employees who separated from the Demonstration Project during the performance year (i.e., prior to receiving a score), and individuals in employment categories not eligible to be rated (e.g., students). Table 3–2 shows a breakdown of the Demonstration Group participants.

Table 3–2. Demonstration Group Participants in the Database

Eligible with performance score of 40 or above	3997
Eligible (3,924)	
Eligible for performance score but not for performance-based pay increase due to promotion or pay adjustment within last 120 days of the rating cycle (73)	
Eligible with no data available on performance score	26
Eligible (12)	
Eligible for performance score but not for performance-based pay increase due to promotion or pay adjustment within last 120 days of the rating cycle (14)	
Eligible with performance scores below 40	1
Total Eligible	**4024**
Not eligible due to recent new hire	301
Not eligible due to status as a temporary student/faculty/coop designation	119
Not eligible due to being on a performance improvement plan	0
Left prior to receiving rating	206
Total Ineligible	**626**
Total Demo Group Participants in Database	**4650**

Note:

1. *The total for "Not eligible due to recent new hire" differs from the number of new hires reported elsewhere because this count only accounts for the new hires who were hired shortly (i.e., within 120 days) before the performance rating cycle.*

3.1.3. Comparison Group analyses are based on either the full set of 2,124 participants or the appropriate subset of participants, depending on the nature of the analyses

In Year Eight, 1,960 of the 2,124 Comparison Group participants were eligible for a performance rating. The remainder was ineligible for performance ratings for a variety of reasons including being recently promoted, a new hire, or on student/faculty/co-op status. Table 3–3 shows a breakdown of the Comparison Group participants.

Table 3–3. Comparison Group Participants in the Database

Eligible	1888
Eligible for performance score but not for performance-based pay increase due to promotion or pay adjustment within last 120 days of the rating cycle	72
Total Eligible (with performance rating)	**1960**
Not eligible due to recent new hire	92
Not eligible due to status as a temporary student/faculty/coop designation	20
Not eligible due to being on a performance improvement plan	0
Left prior to receiving rating	52
Total Ineligible	**164**
Total Comp Group Participants in Database	**2124**

3.1.4. Both descriptive and inferential statistics were used to analyze the Demonstration Project's objective data

Descriptive and inferential statistics were used to analyze the objective personnel data. Descriptive statistics (e.g., frequencies, cross-tabulations, and means) were used to present information about performance scores, pay increases, and bonuses. Inferential statistics (e.g., t-tests, correlations, regression analyses) were used to test the statistical significance of relationships (e.g., between performance scores and pay increases). Inferential statistics were also used to test differences in mean performance payouts to members of protected classes (minorities, females, and veterans). The specific inferential statistics used were ANOVA (analysis of variance—used to test differences in means) and ANCOVA (analysis of covariance—used to test differences in means while controlling for other factors). Appendix B-2 presents a full description of the ANCOVA process and results as they relate to protected classes.

3.2. Booz Allen collected HR summary data from the participating organizations as an additional means of tracking and analyzing data on the use of the Demonstration Project interventions

Booz Allen collected summary level HR data from the participating organizations as an additional source of information regarding the use of the Demonstration Project interventions. Each participating organization in the Demonstration Group and the Comparison Group was asked to submit data pertaining to classification actions, performance rating grievances, and hiring methods used.

4. FINDINGS AND CONCLUSIONS

This chapter presents Booz Allen's Year Eight findings and conclusions regarding the major interventions that are being tested during the Demonstration Project. Each section is dedicated to a set of interventions. Each conclusion is explained and then followed by findings that are supported by the objective data analyses and/or summary HR data analyses.

4.1. As occurred in all previous years, the pay for performance system continues to exhibit a positive link between pay and performance

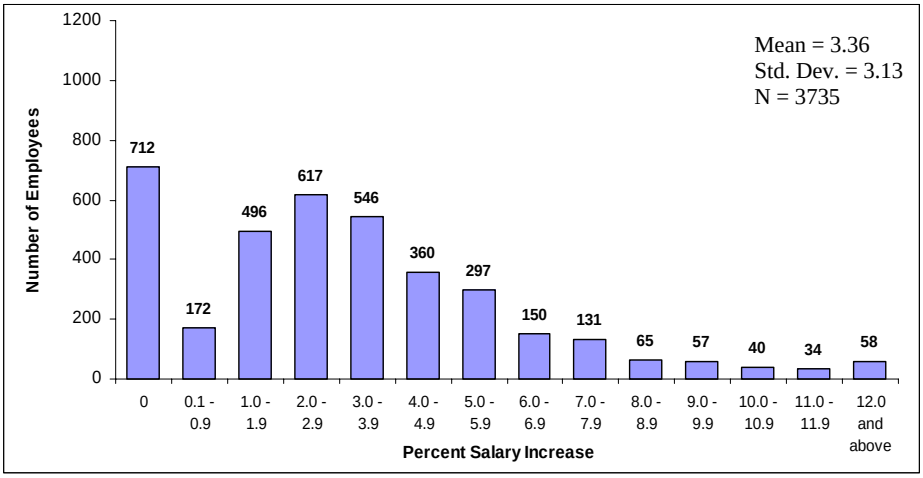
A series of interventions were implemented during the Demonstration Project to improve the relationship between high performance and financial reward. These interventions include performance-based pay increases, performance bonuses, more flexible pay increases upon promotion, and supervisory performance pay.

The findings in Year Eight were consistent with previous years. For example, Demonstration Group participants continued to fare better than Comparison Group participants in performance-based pay increases. Demonstration Group participants also fared better overall, when pay increases and bonuses/awards were combined. The link between pay and performance was evident, with respect to both performance-based pay increases and performance bonuses. And, the flexible pay increase upon promotion intervention was successful in providing managers with greater latitude. The supervisory performance pay intervention continued to reward supervisors who had reached the top of their pay bands (many of whom were performing reasonably well); however, it did not (by design) necessarily reward all high performing supervisors and therefore does not necessarily serve as a motivational tool for supervisors.

4.1.1. The distribution of performance-based pay increases differs in the Demonstration Group and the Comparison Group, with increase amounts more dispersed in the Demonstration Group

Objective data showed that Demonstration Group participants received performance-based pay increases[10] ranging from 0.0 percent to 34.5 percent, with an average performance-based pay increase of 3.4 percent[11] (shown in Figure 4-1). Similar to previous years, the majority of employees (68 percent) received increases between 0 percent and 4 percent. At the high end, fourteen percent of Demonstration Group participants received performance-based pay increases of 6 percent or above, providing some indication that managers are taking advantage of their flexibility to award high percentage increases to higher performing employees. At the low end, 19 percent of Demonstration Group participants (712 employees) did not receive a performance-based pay increase; the majority of these (445 of the 712 employees, or 63 percent) were employees who were at, or near, the top of their pay bands (i.e., capped employees with acceptable performance).

Figure 4-1. Range of Performance-Based Pay Increase Percentages for Demonstration Group Participants



Note:

1. *This analysis is based on 3,735 of the 4,650 Demonstration Group participants who had eligible performance scores*[12] *and for whom salary data were available. There were an additional 262 Demonstration Group participants who had eligible performance scores but for whom salary data were not available.*

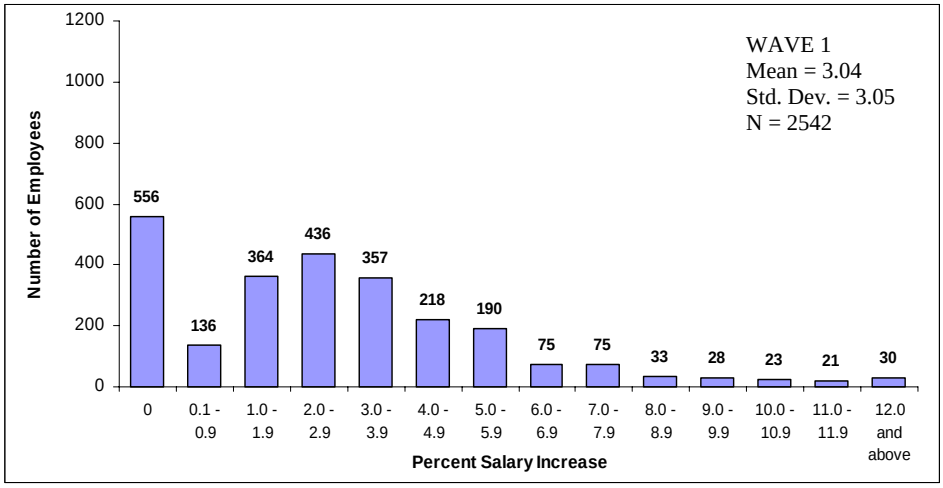
10 The reader is reminded that here, and elsewhere, references to average performance-based pay increase percentages refer to the performance-based component of pay and do not include the annual comparability increase (ACI) that Federal employees also receive.

11 In their review of the Year Seven report, OPM raised concerns about the size of the average performance-based pay increases, especially in Year Seven, and requested that DoC seek to identify the causative factors.

12 For this analysis and those to follow, the term "eligible performance score" refers to the definition provided in Section 3.1.2.

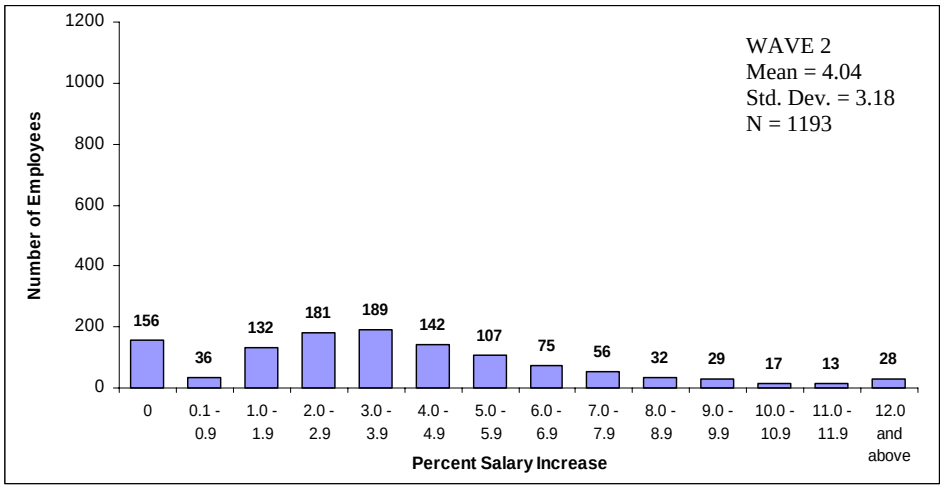
Performance-based pay increases differed for Wave 1 versus Wave 2[13] Demonstration Group participants. Figure 4-2 and Figure 4-3 displays these results. As shown, the average performance-based pay increase for Wave 1 was 3.0 percent. The average performance-based pay increase for Wave 2 was 4.0 percent (which influenced the upward trend in this year's overall average of 3.4 percent). The direction of the difference between Wave 1 and Wave 2 is consistent with Year Seven; however, the magnitude of the difference is smaller than it had been in Year Seven (when the average for Wave 1 was 2.8 percent and the average for Wave 2 was 4.2 percent). One factor that may have influenced the difference between Wave 1 and Wave 2 with respect to the percentage of each group that was employees who were at, or near, the top of their pay bands (i.e., capped). In Wave 1, 19 percent were capped whereas in Wave 2, only four percent were capped. This may partially explain why the Wave 2 average is higher the Wave 1 and higher than the Demo Group average has typically been in past years.

Figure 4-2. Range of Performance-Based Pay Increase Percentages for Demonstration Group Participants – Wave 1 Only



13 Please see Section 2.3 of this report for a description of the Waves.

Figure 4-3. Range of Performance-Based Pay Increase Percentages for Demonstration Group Participants – Wave 2 Only



There are some important differences in how employees in the Demonstration and Comparison Groups are evaluated and rewarded. Employees in the Demonstration Group are evaluated based on a pay for performance system; hence, their pay increases are based on performance. In contrast, employees in the Comparison Group are under the traditional Federal pay system and are under a 2-level or 5-level performance appraisal system. For the Comparison Group, we identified the following categories of increases that would be comparable to the performance-based increases in the Demonstration Group:

- Step increase
- Quality step increase
- Increase due to promotion to a grade within the equivalent pay band in the Demonstration Group.

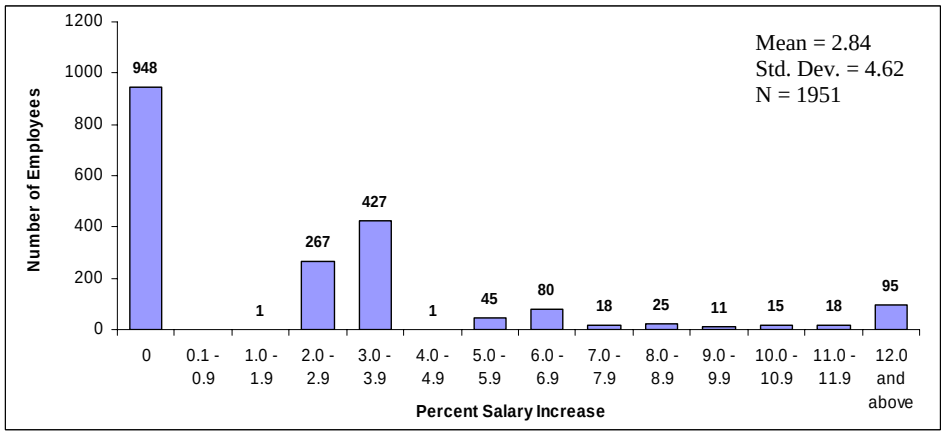
The distribution of salary increase percentages for the Comparison Group is shown in Figure 4-4. (Similar to the Demonstration Group, employees who were recent hires and therefore not eligible for a step increase during this time period were not included in the analysis.) While percent increases in salary in the Comparison Group are not tied to the GS performance rating system, they are presented in this report to establish a pattern for comparison with percent increases in the Demonstration Group. The percent increases ranged from 0.0 percent to 61.3 percent, a greater range than what was evident for the Demonstration Group. Although the range was greater, the average percent increase in the Comparison Group was 2.8 percent, which is lower than the Demonstration Group average. The distribution of increases is also less disperse than for the Demonstration Group; the majority of the participants either received no increase or increases between 2.0 and 3.9 percent.

Similar to Year Seven, a number of individuals received salary increases at the high end of the range, which is surprising given the constraints of the GS system. This appears to be due to how increases as a result of promotion to a grade within the equivalent pay band in the Demonstration Group are included in the calculation for the Comparison Group's calculation

of average salary increase. In support of this theory, further analysis of Year Eight data revealed that all but one of the 182 Comparison Group participants who received increases higher than seven percent did indeed also receive promotions. Therefore, these high salary increases in the Comparison Group are driven by promotion related increases.

Forty-nine percent of the eligible Comparison Group participants did not receive a salary increase in Year Eight, which is likely a function of the GS system wherein employees at the higher steps of a grade wait two to three years between step increases. In comparison, only 19 percent of the eligible Demonstration Group participants did not receive a performance-based pay increase in Year Eight.

Figure 4-4. Range of Salary Increase Percentages for Comparison Group Participants



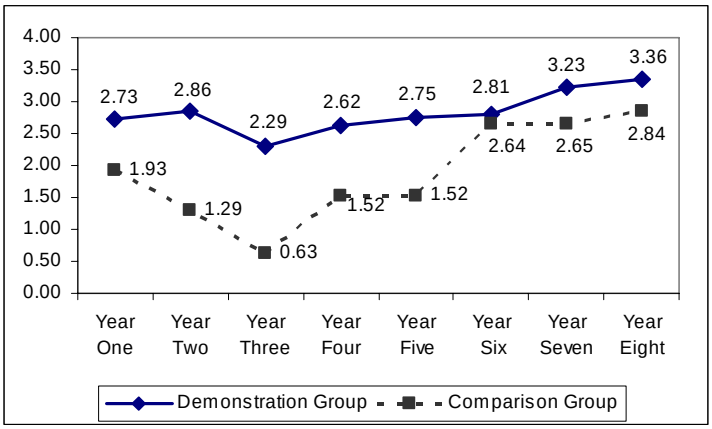
Note:

1. *This analysis is based on 1,951 of the 2,124 Comparison Group participants who had eligible performance ratings and for whom salary data were available.*

4.1.2. Over the years, salary increases have been consistently higher in the Demonstration Group than the Comparison Group; this trend continued in Year Eight

Figure 4-5 displays a trend analysis of the average performance-based pay increases in the Demonstration Group and Comparison Group from Year One to Year Eight. Consistent with previous years, the average performance-based pay increase was higher in the Demonstration Group than in the Comparison Group. In Year Eight, average performance-based pay increases, for both the Demonstration Group and the Comparison Group, reached their highest amounts to date. Differences in the composition of the two groups in terms of occupations, work levels, career ladders, and position in range may account for some of the differences in average performance-based pay increases. (In their review of the Year Seven report, OPM reviewers requested that DoC conduct additional studies regarding this issue.)

Figure 4-5. Trend Analysis of Average Salary Increase Percentages



Note:

1. *The Comparison Group Year Two data point was revised in Year Three to reflect a correction in the formula used to calculate average salary increase percentage.*

4.1.3. A greater percentage of Demonstration Group participants, compared to Comparison Group participants, received bonuses/awards

Demonstration Group bonuses and Comparison Group awards were also compared. The original intent of this analysis was to only include, for the Comparison Group, those awards that are performance-driven and are therefore comparable to the performance-based bonuses used in the Demonstration Group. However, two key issues arose with respect to performing this type of analysis and it became evident that an appropriate "match" may not exist.

One issue is that, in the NOAA portion of the Comparison Group (which comprises 98 percent of the Comparison Group), awards occur throughout the rating period rather than at the end of the rating period. Thus, Comparison Group participants receive awards for service on specific projects or short periods of performance rather than as recognition for sustained superior performance for an entire rating period. These awards have been coded in the NFC system as "Special Act" awards.

In contrast, "Special Act" awards in the Demonstration Group are supposed to be used for extraordinary service for a specific project and are distinctly different from performance bonuses. "Special Act" awards are intended to recognize unusual circumstances in which an employee went above and beyond assigned duties and responsibilities. As a result, in past evaluations, "Special Act" awards were included in the calculations of average award percentages in the Comparison Group but were not included in the calculations of average bonus percentages in the Demonstration Group.

A second issue is that an additional category of cash awards, "Other Awards," has customarily been treated differently in the two groups. These categories include on-the-spot awards, special Bureau specific awards, and cash-in-your-account awards. Given that these are not considered performance-driven, they have not been included in the calculation of average bonus percentage for Demonstration Group participants; however, they were included in the calculation of average award percentage for Comparison Group participants.

To address these challenges, we performed the analysis comparing awards/bonuses in two separate ways. As depicted in Table 4–1, we first performed the analysis as it has been performed in all previous years (bonus analysis – original) so as to maintain consistency, have comparable trend data, and be as true as possible to the concept of performance-driven bonuses/awards (i.e., not including them in the Demonstration Group calculations). The results of this analysis are used in all other analyses in this program evaluation (e.g., progression analysis, turnover analysis) to be consistent with analyses in past years and the original intent of the analyses of performance bonuses. We then analyzed the bonus data for the Demonstration Group again (bonus analysis – expanded), taking into account "Special Act" awards and "Other Awards." This analysis presents the overall picture of the bonuses/awards received by Demonstration Group participants and allows inclusion of "Special Act" awards and "Other Awards," given that these are being accounted for in the Comparison Group calculation.

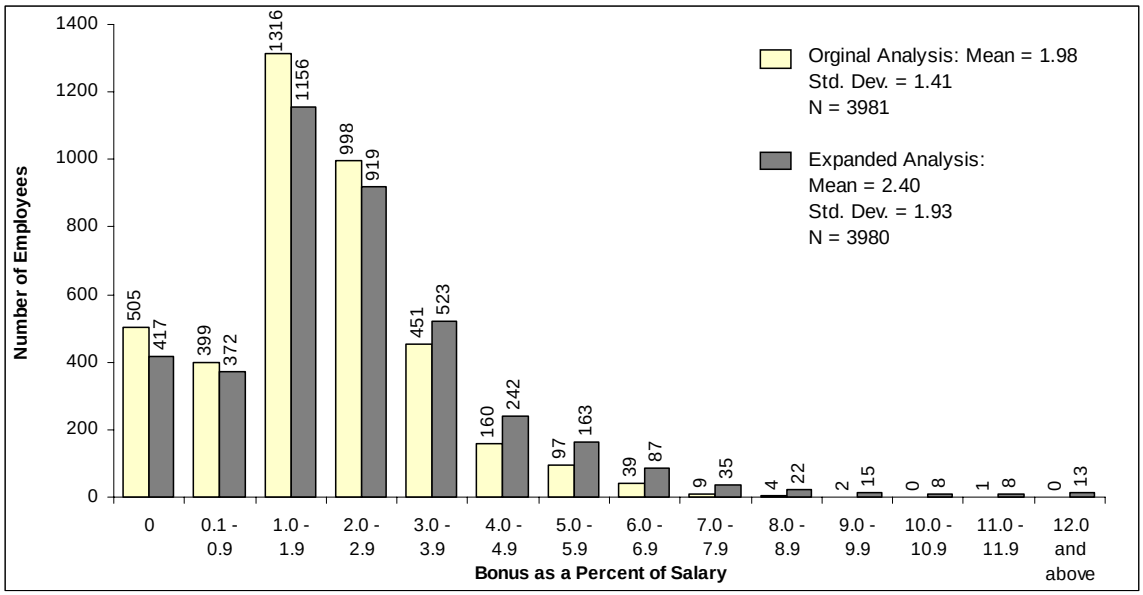
Table 4–1. Bonus Percent Analyses

	BONUS ANALYSIS – ORIGINAL		BONUS ANALYSIS – EXPANDED	
	DEMONSTRATION GROUP	COMPARISON GROUP	DEMONSTRATION GROUP	COMPARISON GROUP
Performance Based Bonuses	Included	N/A	Included	N/A
Special Act Awards	Not Included	Included	Included	Included
Other Awards	Not Included	Included	Included	Included

The original bonus analysis results show that, in Year Eight, 87 percent of Demonstration Group participants received performance-based bonuses. Bonuses ranged from 0.1 percent to 11.8 percent of salary for employees receiving bonuses, with an average bonus of 2.0 percent. Figure 4-6 displays these results.

The expanded bonus analysis results show that, in Year Eight, 90 percent of Demonstration Group participants received the broader range of bonuses (i.e., performance-based bonuses, Special Act awards, and/or Other Awards). Bonuses ranged from 0.1 percent to 22.1 percent of salary for employees receiving bonuses, with an average bonus of 2.4 percent. Figure 4-6 also displays these results. The results of the expanded bonus analysis show that, when these two additional award categories are included in the Demonstration Group calculations, the average bonus percentage for the Demonstration Group increases from 2.0 percent to 2.4 percent. The high percentage of Demonstration Group participants who received some form of bonus, as shown in these analyses, likely also reflects how some salary-capped employees are compensated through the bonus program.

Figure 4-6. Range of Bonus Percentages for Demonstration Group Participants

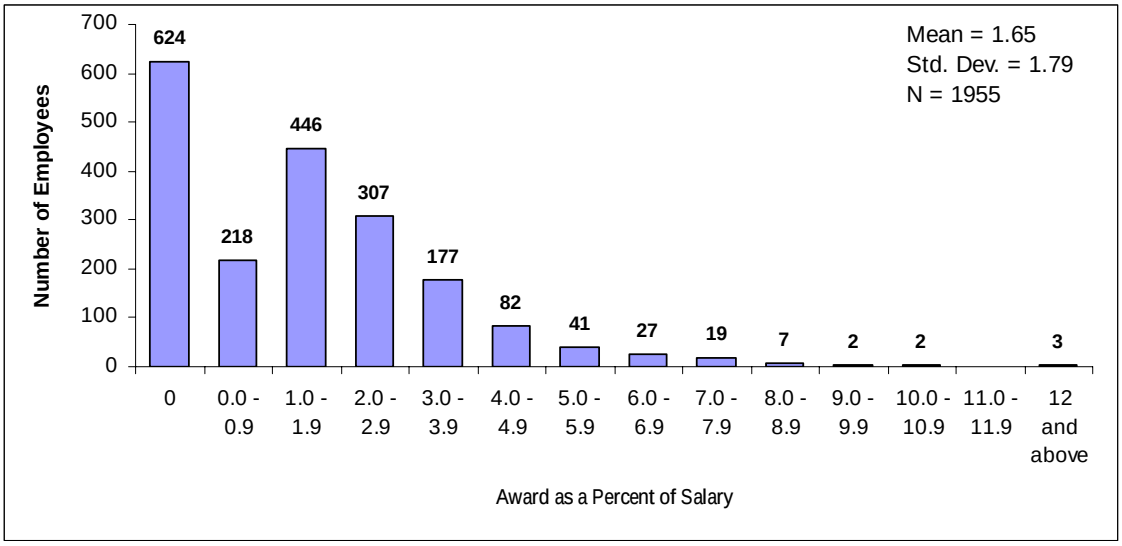


Notes:

1. *This analysis is based on the Demonstration Group participants for whom bonus data were available.*
2. *From Year Five on, the analysis of bonus/award data was addressed in two separate ways for the Demonstration Group. The original analysis was based solely on performance-based bonuses, consistent with previous years. The expanded analysis was based on all bonuses/awards received by Demonstration Group participants and allows inclusion of "Special Act" awards and Other Awards, given that these were accounted for in the Comparison Group calculation.*

The Comparison Group's awards were considered comparable to the performance bonuses given in the Demonstration Group. The results of the original bonus analysis show that, in Year Eight, 68 percent of Comparison Group participants received awards. Among those who received awards, awards ranged from 0.1 percent to 14.9 percent of salary, as shown in Figure 4-7, with an average of 1.7 percent. (This is synonymous with the results of the expanded bonus analysis for the Comparison Group; therefore, separate analyses are not necessary.)

Figure 4-7. Range of Award Percentages for Comparison Group Participants



Note:

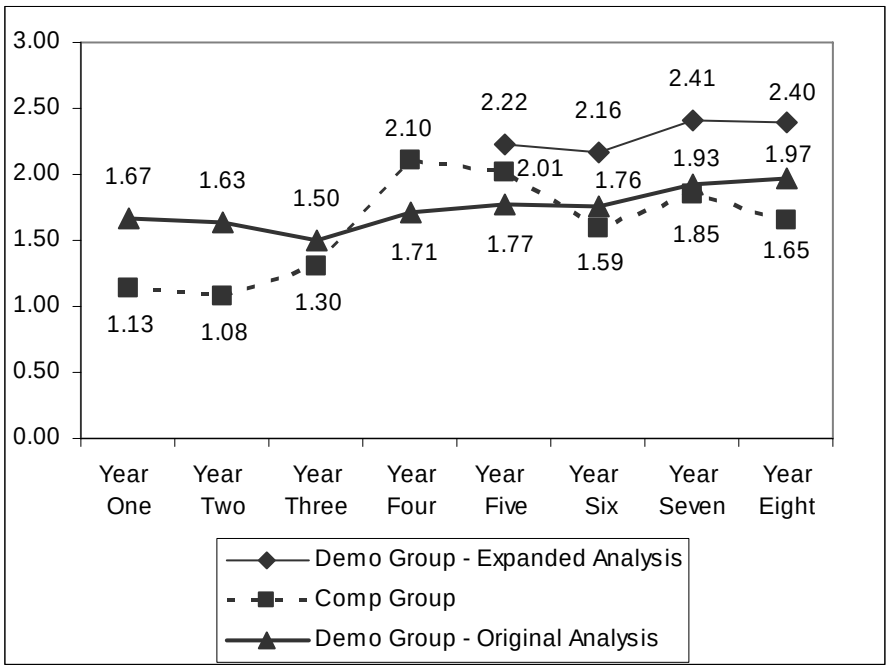
1. *This analysis is based on 1,955 of the 2,124 Comparison Group participants who had eligible performance ratings and for whom award data were available.*

4.1.4. Over the life of the Demonstration Project, average bonus percentages have remained relatively constant for the Demonstration Group whereas average award percentages have fluctuated in the Comparison Group

Figure 4-8 displays a trend analysis of the average bonus/award percentages in the Demonstration and Comparison Groups from Year One to Year Eight. Over time, average bonus percentages in the Demonstration Group have remained relatively constant, with just a slight upward trend in the past few years. This finding is not surprising given that the intent of the intervention is to differentiate and appropriately reward strong versus weak performance, not necessarily to increase the amounts distributed for bonuses.

Meanwhile, average award percentages in the Comparison Group have fluctuated over the years. The average increase peaked in Year Four, decreased in Years Five and Six, increased in Year Seven, and then decreased again in Year Eight. Regardless of whether the original or expanded bonus analysis is used as a comparison, the Demonstration Group average bonus percentages were higher in Year Eight than the Comparison Group average award percentages.

Figure 4-8. Trend Analysis of Average Bonus/Award Percentages



4.1.5. Overall, Demonstration Group participants fared better than Comparison Group participants when pay increases and bonuses/awards are combined

One additional way of examining the impact of a pay for performance system is to consider its total impact (pay increases and bonuses) on Demonstration Group participants. As displayed in Table 4–2, in Year Eight, Demonstration Group participants received increases and bonuses that were, on average, 5.4 percent of their salary. In comparison, Comparison Group participants received increases and awards that were, on average, 4.5 percent of their salary. These results show that, from a total awards basis, Demonstration Group participants fared better overall than Comparison Group participants.

Table 4–2. Comparison of Total Awards

	Demonstration Group	Comparison Group
Average Performance-Based Pay Increase	3.4%	2.8%
Average Bonus/Award	2.0%	1.7%
Average Total Awards (Average Performance-Based Pay Increase Plus Average Bonus/Award Bonus)	5.4%	4.5%

4.1.6. The total awards for Demonstration Group participants may even be an underestimation, given that these figures do not include individuals whose pay has been capped

Employees' performance-based pay increases can be capped if they are at the top of their pay band, regardless of their performance level. In Year Eight, approximately 15 percent of the Demonstration Group participants who had eligible performance ratings and for whom salary data were available had salaries at the maximums for their pay bands (19 percent of Wave 1 participants were capped whereas four percent of Wave 2 participants were capped). An additional seven percent were nearly capped, with "nearly capped" defined as situations where the gap between the employee's initial salary and the pay band maximum was smaller than the average pay increase in Year Eight, that is, they were somewhat close to the maximums for their pay bands.

To determine whether salary capping impacts some individuals more than others, we examined the degree to which Demonstration Group participants are salary capped based on a number of demographic variables: race/national origin, band, and career path. We also examined whether salary capping is or is not occurring to the same degree in the Demonstration Group and the Comparison Group.

As shown in Table 4–3, in Year Eight, the distribution of salary capped employees (both capped and nearly capped) across the race/national origin groups closely mirrored their representation in the Demonstration Group overall. Overall, these results suggest that all race/national origin groups are similarly affected by salary capping.

Table 4–3. Capped Employees by Race/National Origin

RACE/NATIONAL ORIGIN	REPRESENTATION AMONG CAPPED EMPLOYEES	REPRESENTATION AMONG NEARLY CAPPED EMPLOYEES	OVERALL REPRESENTATION IN THE DEMONSTRATION GROUP
White (not of Hispanic origin)	82%	82%	77%
Black (not of Hispanic origin)	11%	13%	13%
Hispanic	4%	1%	3%
Asian or Pacific Islander	3%	4%	6%
American Indian or Alaskan Native	0%	1%	<1%

Notes:

1. *The first two columns are based on the 573 (and 280) Demonstration Group participants who had salaries at the maximums (near the maximums) for their pay bands, had eligible performance ratings, and for whom salary and race/national origin data were available.*
2. *The third column is based on all Demonstration Group participants in the database for whom race/national origin data were available.*

As shown in Table 4–4, in Year Eight, the distribution of salary capped employees across bands shows differing results based on band. Overall, these results show that, across the bands, salary capped employees are over-represented among Band 3 and Band 5, that is, more Band 3 and Band 5 employees are salary capped than is their overall representation. And, these results show that, across the bands, *nearly capped* employees are also most over-represented among Band 3 and Band 5; in these two bands, the percentage of employees who are nearly capped exceeds the percentages for their overall representation.

Table 4–4. Capped Employees by Band

BAND	REPRESENTATION AMONG CAPPED EMPLOYEES	REPRESENTATION AMONG NEARLY CAPPED EMPLOYEES	OVERALL REPRESENTATION IN THE DEMONSTRATION GROUP
Band 1	<1%	1%	2%
Band 2	4%	13%	12%
Band 3	40%	39%	33%
Band 4	37%	33%	42%
Band 5	19%	15%	11%

Notes:

1. *The first two columns are based on the 573 (and 280) Demonstration Group participants who had eligible performance ratings, for whom pay band data were available, for whom salary data were available, and who had salaries at the maximums (or near the maximums for their pay bands).*
2. *The third column is based on all Demonstration Group participants in the database for whom band data were available.*

As shown in Table 4–5, in Year Eight, the distribution of salary capped employees across career paths showed few differences based on career path. Overall, these results show that, across the career paths, the distribution of salary capped employees closely mirrored their representation in the Demonstration Group overall, with a slight over-representation of ZPs and a slight under-representation of ZAs among those who are salary capped.

Table 4–5. Capped Employees by Career Path

CAREER PATH	REPRESENTATION AMONG CAPPED EMPLOYEES	REPRESENTATION AMONG NEARLY CAPPED EMPLOYEES	OVERALL REPRESENTATION IN THE DEMONSTRATION GROUP
ZP	65%	52%	60%
ZT	6%	6%	6%
ZA	19%	18%	24%
ZS	10%	24%	11%

Notes:

1. *The first two columns are based on the 573 (and 280) Demonstration Group participants who had eligible performance ratings, for whom career path data were available, for whom salary data were available, and who had salaries at the maximums (or near the maximums for their pay bands).*
2. *The third column is based on all Demonstration Group participants in the database for whom career path data were available.*

Given that salary capping occurs in nearly any pay system, we also examined whether salary capping occurred in reasonably comparable amounts in the Demonstration Group and the Comparison Group. Given the challenges of defining salary capping in the GS system (since the maximum grades vary depending on the position), we performed this analysis on a sample: the subset of Demonstration Group participants who are in ZA or ZP, and in Band 4 or Band 5, and the subset of Comparison Group participants who are in the equivalent of ZA or ZP, and in GS 14 (step 10) or GS 15 (step 10). As shown in Table 4–6, in Year Eight, for each of the four groups examined, a higher percentage of employees were impacted by salary capping in the Comparison Group than the Demonstration Group. These results show that salary capping impacts different types of pay systems and is not a unique concern of the Demonstration Project.

Table 4–6. Comparison of Salary Capping in a Subset of the Demonstration Group and Comparison Group

SUBSET	PERCENTAGE CAPPED	
	DEMONSTRATION GROUP	COMPARISON GROUP
ZA, Band 4 (or, ZA Equivalent, GS 14, Step 10)	13%	20%
ZP, Band 4 (or, ZP Equivalent, GS 14, Step 10)	11%	22%
ZA, Band 5 (or, ZA Equivalent, GS 15, Step 10)	13%	37%
ZP, Band 5 (or, ZP Equivalent, GS 15, Step 10)	29%	37%

Note:

1. *This analysis is based on participants who had salaries at the maximums for their pay bands, had eligible performance ratings, and for whom salary data were available.*

4.1.7. ZP and ZA fared best for performance-based pay increases and ZS fared best for performance-based bonuses

One of the features of the DoC Demonstration Project is to determine whether NIST Demonstration Project interventions can be successfully implemented to a wider range of occupational areas. Therefore, the DoC Demonstration Project was designed to include four career paths: ZP (Scientific and Engineering), ZT (Scientific and Engineering Technician), ZA (Administrative), and ZS (Support). While each of these career paths includes a range of occupations, examining the differences across the career paths provides some indication of the impact of interventions on different occupational groupings.

The Year Eight results showed that the average performance-based pay increase across the Demonstration Project was 3.4 percent; however, the results varied across career paths. These results are displayed in Table 4–7. These findings show that the largest average performance-based pay increases were experienced by, in descending order, those in the ZP, ZA, and ZS and ZT (tied) career paths. This rank order is consistent with Year Seven. This rank order is also consistent with the three-year historical pay increase averages obtained prior to the Demonstration Project for individuals in these career paths.

Table 4–7. Average Performance-Based Pay Increase by Career Path

CAREER PATH	NUMBER OF EMPLOYEES	AVERAGE PERFORMANCE-BASED PAY INCREASE
ZP	2339	3.6%
ZT	190	2.4%
ZA	836	3.5%
ZS	370	2.4%
Overall	3735	3.4%

Notes:

1. *Average pay increase by career path were computed for 3,735 of the 4,650 Demonstration Group participants for whom career path and salary data were available.*
2. *The overall average performance-based pay increase represents the average across the Demonstration Group; it does not represent a straight average of the averages for each career path.*

For average bonus percentage in the Demonstration Group, the results showed that the overall average was 2.0 percent; Table 4–8 displays how the results vary across career paths. These findings show that the largest average bonuses were experienced by, in descending order, those in the ZS, ZA, ZT, and ZP career paths, which is the same order that occurred in Year Seven. However, this order differs from that which occurred for average performance-based pay increases. One noticeable difference is that those in the ZS career path received smaller than average performance-based pay increases, but larger than average bonuses; this finding was noticeable in Year Seven as well. A possible explanation may be that individuals in ZS are more generously awarded with performance-based bonuses to compensate for smaller performance-based pay increases.

Table 4–8. Average Bonus by Career Path

CAREER PATH	NUMBER OF EMPLOYEES	AVERAGE BONUS
ZP	2482	1.8%
ZT	212	1.9%
ZA	901	2.1%
ZS	386	2.8%
Overall	3981	2.0%

Notes:

1. *Average bonus by career path were computed for 3,981 of the 4,650 Demonstration Group participants for whom career path and salary data were available.*
2. *The overall average performance-based pay increase represents the average across the Demonstration Group; it does not represent a straight average of the averages for each career path.*

4.1.8. The average performance appraisal score steadily increased over the first six years of the Demonstration Project, dipped in Year Seven, and increased again in Year Eight

Employee performance is measured in the Demonstration Group on a weighted 100-point scoring system. These scores are then used as the basis for performance-related decisions for pay and rewards. Table 4–9 displays the average performance appraisal scores in the Demonstration Group over the past eight years. These data show that, after steadily increasing over the years, the average performance appraisal score decreased in Year Seven, and then increased again in Year Eight (with an average performance appraisal of 86.3).

The average performance appraisal score differed by wave. The Year Eight Wave 1 average performance appraisal was 86.9 points, which is consistent with Year Six and slightly lower than Year Seven Wave 1 average performance appraisal of 87.2 points. The Year Eight Wave 2 average performance appraisal was 85.0 points, which represents an increase from the Year Seven Wave 2 score of 83.0 points. To note, while Wave 2 had a lower average performance appraisal score than Wave 1 in Year Eight, results presented earlier showed that the Wave 2 had a higher average performance-based pay increase. This finding was also apparent in Year Seven.

Table 4–9. Average Performance Appraisal Scores Across Years

DEMONSTRATION PROJECT YEAR	AVERAGE PERFORMANCE APPRAISAL SCORES
Year One	82.0 points
Year Two	83.4 points
Year Three	84.3 points
Year Four	85.7 points
Year Five	86.5 points
Year Six	86.9 points
Year Seven	85.9 points
Year Eight	86.3 points

Notes:

1. *Average performance appraisal scores are the average number of points received under the 100-point system.*
2. *In Year Eight, average performance appraisal score was computed for the 3,997 of the 4,650 Demonstration Group participants for whom performance score data of 40 and above were available.*

4.1.9. The rank order of career paths for average performance scores differs somewhat from the rank order of career paths for average performance-based pay increases

We also examined average performance appraisal scores in Year Eight by career path. As displayed in Table 4–10, these findings show that the highest performance scores were experienced by, in descending order, those in the ZA, ZP, ZT, and ZS career paths. This order differs somewhat from that which was found for average performance-based pay increases. However, certain patterns are evident. For example, ZP and ZA are collectively the two career paths with the highest average performance-based pay increase and they are collectively the two career paths with the highest average performance appraisal scores. And, ZS is one of two career paths with the lowest average performance-based pay increase and is also the career path with the lowest average performance appraisal score.

Table 4–10. Average Performance Score by Career Path

CAREER PATH	NUMBER OF EMPLOYEES	AVERAGE PERFORMANCE APPRAISAL SCORES
ZP	2486	86.6 points
ZT	213	85.6 points
ZA	908	86.7 points
ZS	390	84.0 points
Overall	3997	86.3 points

Notes:

1. *Average performance appraisal scores by career path were computed based on the 3,997 of the 4,650 Demonstration Group participants for whom career path and performance score data of 40 and above were available.*
2. *Average overall performance score was also computed for 3,997 of the 4,650 Demonstration Group participants for whom performance score data of 40 and above were available and represents a non-weighted average across the Demonstration Group.*

4.1.10. The link between performance and pay remains evident in the Demonstration Group

The link between performance and pay is fundamental to the Demonstration Project. As in previous years, objective data indicated that financial rewards are tied to job performance during Year Eight. In Years One, Two, and Three, Booz Allen used correlation analysis as a broad measure of the relationship between pay and performance score. While this analysis was one of many analyses conducted to better assess the impact of performance on pay, it did not incorporate other factors that could impact pay progression. For this reason, from Year Four on, Booz Allen conducted a regression analysis instead of the correlation analysis.

The results of the Year Eight regression analysis (presented in Appendix B-2) confirmed that performance score was a consistent predictor of performance-based pay increase across all career paths. This provides support for a pay and performance link within the Demonstration Project by demonstrating that performance score is a key factor influencing pay. These results also show that the Demonstration Project is operating as intended because the system is designed to ensure a high degree of linkage between pay and performance.

The regression analysis results also showed that organization was a consistent predictor of performance-based pay increase in all four career paths in Year Eight. The difference in pay increases across organizations likely results from the fact that organizations operate under different pay pools that were built from different historical data. No other variables (aside from performance score and organization) were consistent predictors across all four career paths.

Finally, given the emphasis on examining the impact of the pay for performance system on minorities, women, and veterans, we included these demographic variables in the regression analysis. In eleven of the twelve analyses (one analysis for each combination of the four career path and the three demographic variable categories), the demographic variables were not found to be significant predictors of performance-based pay increase, beyond what was predicted by the variables discussed above. The one exception was in the ZA career path, in which race was found to be a predictor of performance-based pay increase, although it was a weaker predictor than performance score as well as interval, organization, age, and supervisor status.

4.1.11. Demonstration Group participants with higher performance scores received larger pay increases than Demonstration Group participants with lower performance scores, demonstrating the link between pay and performance

In addition to the regression analysis, a second analysis was performed to examine the relationship between pay and performance. In theory, under a pay for performance system, better performers should receive higher pay increase percentages. Conversely, lower performers should be more likely to receive lower pay increase percentages or none at all.

Table 4–11 shows additional support that this is happening in the Demonstration Group. In Year Eight, for the most part, participants with higher performance scores were more likely to receive pay increases than were those with lower performance scores. The finding that not *all* of those in the highest performance score category (i.e., 90-100) received increases is likely due to two factors. One, this group is disproportionately represented among the 15 percent of Demonstration Group participants who were at the maximums for their pay bands (41 percent of capped employees are in 90-100 performance score range whereas only 33 percent of employees, overall, are in the 90-100 performance score range). And two, this includes employees who did not receive a pay increase due to having received a promotion or pay adjustment (within band) within the last 120 days of the rating cycle. Overall, participants with higher performance scores received larger pay increases than those with lower performance scores. This finding is also consistent with the tenets of a pay for performance system.

Table 4–11. Performance Score Category and Performance-Based Pay Increases Among Demonstration Group Participants

PERFORMANCE SCORE CATEGORY	NUMBER AND PERCENTAGE OF EMPLOYEES	NUMBER AND PERCENT OF EMPLOYEES RECEIVING PAY INCREASES	AVERAGE PERFORMANCE-BASED PAY INCREASE PERCENTAGE
90-100	1304 (33%)	979 (83%)	4.2%
80-89	2309 (58%)	1825 (84%)	3.3%
70-79	321 (8%)	209 (68%)	1.3%
60-69	51 (1%)	9 (18%)	0.3%
50-59	9 (<1%)	1 (13%)	0.1%
40-49	3 (<1%)	0 (0%)	0.0%
<40	1 (<1%)	0 (0%)	0.0%

Notes:

1. *The calculation of Number and Percentage of Employees is based on the 3,998 employees for whom valid Year Eight performance scores were available.*
2. *The calculation of Number and Percentage of Employees Receiving Pay Increases is based on the 3,736 employees for whom valid Year Eight performance scores and salary data were available.*

4.1.12. The link between performance and pay, as measured by bonuses/awards, remains evident in the Demonstration Group

As was found for performance-based pay increases, objective data indicated that employee bonuses were tied to performance during Year Eight. Statistics revealed a positive relationship between job performance (as measured by performance scores) and performance bonuses (r = .35)[14],[15] (Appendix B-2 provides a scatterplot of the data). This correlation is significant and consistent with Year Seven but slightly lower than the first six years (Year Seven: r = .34; Year Six: r = .42; Year Five: r = .42; Year Four: r = .37; Year Three: r = .46; Year Two: r = .41; and Year One: r = .46)[16]. In this context (i.e., the relationship between performance and bonuses), the higher the correlation the better. Given that perfect correlations are rare (and not typically expected) in organizational research, this correlation represents a reasonable degree of relationship between performance and bonuses, particularly given all the extraneous factors known to affect this relationship.

14 *This analysis is based on the 3,981 of the 4,650 Demonstration Group participants for whom performance score and bonus data were available.*

15 *Correlations explain the degree of a relationship between two variables. Values of Pearson's "r" range from -1.0 to 1.0, where 0 represents no relationship, -1.0 represents a perfect negative relationship, and 1.0 represents a perfect positive relationship.*

16 *All of these reported correlations were significant at the $p \leq .01$ level.*

We also examined the relationship between job performance and bonuses in Year Eight by career path. As displayed in Table 4–12, the results suggest that the relationship between performance and bonuses is strongest for, in descending order, those in the ZT, ZA, ZS, and ZP career paths. This order differs from Year Seven in which the relationship was strongest for, in descending order, the ZS, ZA, ZP, and ZT career paths.

Table 4–12. Correlation Between Performance Scores and Bonuses by Career Path

CAREER PATH	NUMBER OF EMPLOYEES	CORRELATION BETWEEN PERFORMANCE SCORE AND BONUS
ZP	2339	.28
ZT	190	.44
ZA	836	.30
ZS	370	.29

Notes:
1. *All results are significant at the $p \leq .01$ level.*
2. *Correlation by career path was computed for 3,735 of the 4,650 Demonstration Group participants for whom performance score, bonus data, and career path data were available.*

4.1.13. Evidence suggests that the flexible pay increase upon promotion intervention has been successful in providing managers with greater latitude in setting salary upon promotion

The flexible pay increase upon promotion intervention provides managers with the flexibility to offer substantial pay increases when employees are promoted. Because of the less restrictive nature of pay bands, an employee's salary, upon promotion, can be set anywhere within a band (and with a minimum increase of six percent). This intervention is intended to reward high performing employees and encourage their retention by making their salaries more competitive with the public and private sectors.

Table 4–13 suggests that this intervention continues in Year Eight, as in past years, to be effectively utilized. By subtracting the smallest promotion amount from the largest promotion amount, we calculated the size of the range of pay increases upon promotion. Thus, the size of the range is used as an indicator of flexibility in granting pay increases upon promotion, such that larger ranges are equated with having greater flexibility.

At most levels of promotion (e.g., from Band 1 to Band 2), managers in the Demonstration Group used a wider range of pay increases upon promotion than did those in the Comparison Group. One exception is promotions from Band 4 to Band 5 (or the equivalent in the Comparison Group) in which there was a greater range in pay increases upon promotion among the Comparison Group. For each comparison between the Demonstration Group and the Comparison Group, the wider range in pay increases upon promotion appears in bold.

Table 4–13. Range of Pay Increases Upon Promotion

Promotion by Band (or equivalent)	Demonstration Group		Comparison Group	
Band after promotion	Employees	Size of Range of Increase Upon Promotion	Employees	Size of Range of Increase Upon Promotion
Band 2	4	**$9,168**	5	$5,191
Band 3	41	**$10,816**	46	$8,322
Band 4	35	**$17,877**	50	$11,329
Band 5	17	$11,082	10	**$18,115**

Notes:

1. *Promotions are reported for those cases in which employees were promoted across bands (or the equivalent in the Comparison Group).*
2. *Size of range was computed by subtracting the smallest promotion amount from the largest promotion amount.*

In addition to the individuals included in this analysis, there were an additional eight individuals in the Demonstration Group who were promoted. These individuals' promotions included changing from the ZS to the ZA career path. In doing so, they switched from ZS Band 4 to ZA Band 2. While the band number decreased, these constituted promotions.

4.1.14. The benefits of a pay for performance system over the longer term are evident as high-performing Demonstration Group participants outpace all others over time

To examine more fully the link between performance and pay, we have been analyzing the salary progression of a subset of the Demonstration Project participants over time. Specifically, we examined performance-based pay increases and bonuses/awards over eight years (increases due to promotions were not included because insufficient data were available from the earlier years). Employees in the ZP career path, pay band 4, and interval 1 (or the Comparison Group equivalent) in Year One were selected for examination because they are the most populous group in the Demonstration Project's ZP career path. We identified these individuals in the Year One data file and then tracked the same individuals in the Year Two, Three, Four, Five, Six, Seven, and Eight data files to determine their progression.

We selected this one subset to serve as an example and therefore caution the reader about generalizing these findings more broadly. However, given that the same decision rules regarding compensation apply across career paths and pay bands, we would expect that similar outcomes would result if a different subset of the Demonstration Project were selected.

Table 4–14 shows that after eight years in the Demonstration Project, high performers in the Demonstration Group in this analysis have experienced, on average, a $36,817 increase, based on performance-based pay increases and bonuses. This amount exceeds the average eight-year increase ($23,136) of others in the Demonstration Group of the same career path, pay band, and interval. This finding supports the hypothesis that higher performance is paying off, both on a year-over-year basis, as well as over the longer term.

Table 4–14. Progression Analysis – Demonstration Group Participants Who Started in ZP Career Path, Pay Band 4, and Interval 1 in Year One

		YEAR ONE	YEAR TWO	YEAR THREE	YEAR FOUR	YEAR FIVE
Demonstration Group With Performance Scores of 90-100 (High Performers)	Average Performance-Based Pay Increase	$2,757	$2,996	$2,833	$2,949	$2,822
	Average Bonus Amount	$1,224	$1,252	$1,343	$1,439	$1,468
	TOTAL	$3,981	$4,248	$4,176	$4,388	$4,290
Demonstration Group With Performance Scores of 40-89	Average Performance-Based Pay Increase	$1,412	$1,779	$1,674	$1,678	$2,095
	Average Bonus Amount	$768	$813	$953	$1,041	$1,040
	TOTAL	$2,180	$2,592	$2,627	$2,719	$3,135

		YEAR SIX	YEAR SEVEN	YEAR EIGHT	AFTER EIGHT YEARS
Demonstration Group With Performance Scores of 90-100 (High Performers)	Average Performance-Based Pay Increase	$3,437	$3,341	$3,961	$25,096
	Average Bonus Amount	$1,520	$1,510	$1,965	$11,721
	TOTAL	$4,957	$4,851	$5,926	$36,817
Demonstration Group With Performance Scores of 40-89	Average Performance-Based Pay Increase	$2,057	$2,267	$2,409	$15,371
	Average Bonus Amount	$895	$1,063	$1,192	$7,765
	TOTAL	$2,952	$3,330	$3,601	$23,136

Notes:

1. *Demonstration Group performance-based pay increases are based on valid data for all employees receiving zero or greater performance-based pay increases.*
2. *For this analysis, the number of participants in each group in each year ranged from 56 to 216.*
3. *These analyses were done in "then year dollars." We considered normalizing the data to "constant year dollars," but determined that the results would not differ to any significant degree.*
4. *The data reported for Years One, Two, and Three vary slightly from that which was reported in Year Three. This analysis was revised to include only those employees who were in their respective groups for the entire eight years and does not include individuals who left and rejoined the organization.*

Table 4–15 shows that after eight years, the Demonstration Group participants in this analysis experienced greater salary progression compared to their Comparison Group counterparts (of the equivalent career path, pay band, and interval).[17] One assumption could be that the difference in salary progression is due to the difference between the two groups in the frequency with which employees experience salary increases. Under the GS system, Comparison Group participants do not receive increases every year. Rather, step within grade determines whether they receive increases every year, two years, or three years. In comparison, Demonstration Group participants are eligible to receive increases every year based on performance. However, this difference in the frequency of increases is accounted for in the analysis because the analysis is based on the average increase, across individuals, in any given year. As a result, these findings appear to demonstrate that the Demonstration Project interventions are resulting in greater salary gains for those within the Demonstration Group over time.

Table 4–15. Progression Analysis – Comparison of Demonstration Group and Comparison Group Participants Who Started in ZP Career Path, Pay Band 4, and Interval 1 in Year One (or the equivalent)

		YEAR ONE	YEAR TWO	YEAR THREE	YEAR FOUR	YEAR FIVE
Demonstration Group	Average Performance-Based Pay Increase	$1,771	$2,218	$2,129	$2,243	$2,401
	Average Bonus Amount	$889	$969	$1,106	$1,218	$1,221
	TOTAL	$2,660	$3,187	$3,235	$3,461	$3,622
Comparison Group	Average Performance-Based Pay Increase	$1,186	$1,501	$497	$1,127	$1,007
	Average Award Amount	$758	$882	$1,017	$1,572	$1,418
	TOTAL	$1,944	$2,383	$1,514	$2,699	$2,425

		YEAR SIX	YEAR SEVEN	YEAR EIGHT	AFTER EIGHT YEARS
Demonstration Group	Average Performance-Based Pay Increase	$2,716	$2,762	$3,046	$19,286
	Average Bonus Amount	$1,194	$1,269	$1,513	$9,379
	TOTAL	$3,910	$4,031	$4,559	$28,665
Comparison Group	Average Performance-Based Pay Increase	$1,262	$1,561	$892	$9,033
	Average Award Amount	$1,739	$1,379	$1,219	$9,984
	TOTAL	$3,001	$2,940	$2,111	$19,017

Notes:

1. *Demonstration and Comparison Group performance-based pay increases are based on valid data for all employees receiving zero or greater performance-based pay increases.*
2. *For this analysis, the number of participants in each group in each year ranged from 33 to 217.*
3. *These analyses were done in "then year dollars." We considered normalizing the data to "constant year dollars," but decided that the results would not differ to any significant degree.*
4. *The data reported for Years One, Two, and Three vary slightly from that which was reported in Year Three. This analysis was revised to include only those employees who were in their respective groups for the entire eight years and does not include individuals who left and rejoined the organization.*

17 This analysis defined salary increases for the Comparison Group in the same fashion as the other analyses in this report, that is, as Step Increases, Quality Step Increases, and Promotion Increases (when the promotion was equivalent to a transition within a pay band under the Demonstration Project).

4.1.15. The supervisory performance pay intervention continued to reward supervisors who had reached the top of their pay bands (many of whom were performing reasonably well); however, it did not (by design) necessarily reward all high performing supervisors

The supervisory performance pay intervention facilitates paying supervisors at more competitive levels, with the intended outcome of encouraging retention and motivating higher performance. It serves as a means for extending the pay for supervisors in recognition of the additional responsibilities that they assume. As designed, this intervention is used for supervisors who reach the normal maximum rate for their pay band and therefore are placed in the pay intervals designated as supervisory performance pay (i.e., intervals 4 and 5). Supervisors receive performance scores along with all other employees in the Demonstration Group and are given pay increases appropriate to their scores. Therefore, it is only when the supervisor reaches the top of the pay band that the intervention is enacted.

There were 631 supervisors in the Demonstration Group during Year Eight. Of these 631 supervisors, 148 were eligible for supervisory performance pay and 442 supervisors were not (the remaining 41 supervisors lacked sufficient data to determine whether or not they received supervisory performance pay). Table 4–16 shows a comparison to previous years.

In Year Eight, there was a difference in the average performance scores between those supervisors who were or were not eligible for supervisory performance pay: Supervisors who were eligible for supervisory performance pay had an average score of 89.3 points (with a range of 76 to 98 points) while the average among all other supervisors was 88.1 points (with a range of 65 to 98 points). The gap between the two groups (1.2 points) is smaller than it has been in most other years. Both of these average scores are higher than the overall average for the Demonstration Group (86.3 points).

Table 4–16. Supervisory Performance Pay and Average Performance Scores

	Total Number of Supervisors	Eligible for Supervisory Performance Pay		Not Eligible for Supervisory Performance Pay		Average Performance Score Gap
		Number	Average Performance Score	Number	Average Performance Score	
Year Two	218	44	89.9 points	174	88.9 points	1.0 points
Year Three	222	41	91.1 points	181	89.2 points	1.9 points
Year Four	189	50	91.6 points	139	89.2 points	2.4 points
Year Five	276	89	91.3 points	187	90.3 points	1.0 points
Year Six	284	92	92.0 points	192	89.5 points	2.5 points
Year Seven	617	107	90.6 points	494	87.5 points	3.1 points
Year Eight	631	148	89.3 points	442	88.1 points	1.2 points

Notes:

1. *Year One data were not available for this analysis.*
2. *Average performance scores are based upon the number of supervisors for whom performance score data were available, which is less than the number of people reported as being in each group overall.*

As shown in Table 4–17, among those eligible for supervisory performance pay, 96 percent (58 percent plus 38 percent) had performance scores above 80. A similar distribution of performance scores was evident for those supervisors who were not eligible for supervisory performance pay. This shows that those who are eligible for supervisory performance pay are in fact performing reasonably well (i.e., 80 or above).

Table 4–17. Supervisory Performance Pay and Distribution of Performance Scores

PERFORMANCE SCORE CATEGORY	Eligible for Supervisory Performance Pay	Not Eligible for Supervisory Performance Pay
90-100	58%	44%
80-89	38%	51%
70-79	4%	5%
60-69	0%	<1%
50-59	0%	0%
40-49	0%	0%
TOTAL	**100%**	**100%**

Note:
1. This analysis is based on the 590 of the 631 supervisors for whom performance score data were available.

The supervisory performance pay intervention is not designed to reward high performance in all supervisors, per se, which is evident from the data. Table 4–18 shows that some of the top performing supervisors are not eligible for supervisory performance pay. Among the highest performing supervisors (those in the 90-100 performance score category), only 30 percent were eligible for supervisory pay. Similarly, among all the supervisors who were in the 80-89 performance score category, only 20 percent were eligible for supervisory pay. Thus, supervisory performance pay may be a motivator for supervisors by expanding the future salary growth potential for supervisors (by expanding the pay band maximum by 6 percent), but it does not necessary serve (by design) as an immediate reward for current high performance. This occurs because eligibility for supervisory performance pay is primarily driven by salary and secondarily by performance. As such, this intervention was designed to reward the highest paid supervisors – but does not necessarily reward the highest performing supervisors.

Table 4–18. Distribution Across Each Performance Score Category

PERFORMANCE SCORE CATEGORY	Eligible for Supervisory Performance Pay	Not Eligible for Supervisory Performance Pay	Total
90-100	30%	70%	**100%**
80-89	20%	80%	**100%**
70-79	22%	78%	**100%**
60-69	0%	100%	**100%**
50-59	-	-	**-**
40-49	-	-	**-**

Note:
1. This analysis is based on the 590 of the 631 supervisors for whom performance score data were available.

Finally, among each group (those supervisors who were or were not eligible for supervisory performance pay), a relationship was not evident between performance scores and performance-based pay increases. While supervisors who are eligible for supervisory performance pay had higher average performance scores than those supervisors who were not eligible, the supervisors who were eligible had lower average performance-based pay increases (1.3 percent) than those supervisors who were not eligible (3.6 percent). (To note, supervisory performance pay is not factored into the performance-based pay calculations so those who were eligible likely received increases higher than 1.3 percent once their supervisory performance pay was distributed).

4.2. Most of the Demonstration Group scientists and engineers who had time left in their three-year probationary periods were kept on probation, which gave managers a longer timeframe to evaluate performance

The three-year probationary period for scientists and engineers intervention was designed to allow supervisors the ability to make permanent hiring decisions for research and development (R&D) positions based on employees' demonstrated capabilities in the full R&D cycle. This intervention provides these supervisors with the ability to terminate poor performing employees any time during the three-year period rather than being limited to the typical one-year probationary period.

As displayed in Table 4–19, in Year Eight, 147 employees were under the three-year probation, 27 of whom had just started their probation in Year Eight. By the end of Year Eight, 79 employees remained on the three-year probation going into Year Nine.

By the end of Year Eight, 66 employees who had been under the three-year probation had been made permanent: 26 were employees were made permanent after completing at least three years on the three-year probation and an additional 24 were made permanent during their third year[18]. The remaining 16 were released early from the three-year probation: 11 were in the second year and five were in their first year at the time they were made permanent. The relatively low percentage (16 of 66, or 24 percent) of individuals taken off probation (i.e., made permanent) in just their first or second year indicates that managers are making use of this intervention by allowing employees to remain in probationary status for a longer period of time, thus giving employees a longer time horizon in which to demonstrate their skills.

18 *The data provided by DoC suggests that all decisions about keeping or releasing employees from the three-year probation is occurring on a single date each year; for this reason, some individuals are being released (i.e., made permanent) from probation after three full years have expired and some are being released from probation just short of their three years. Either of these scenarios will be considered as having served the three-year probationary period, for analysis purposes.*

Table 4–19. Employees on Three-Year Probation

Year Probation Began	Number on Probation in Year Eight	Number Made Permanent in Year Eight	Number Remaining on Probation at End of Year Eight	Number Who Resigned
Demo Project Year Four	3	2	1	0
Demo Project Year Five	47	24	23	0
Demo Project Year Six	40	24	16	0
Demo Project Year Seven	30	11	17	2
Demo Project Year Eight	27	5	22	0
TOTAL	147	66	79	2

Another useful metric of this intervention is the number of employees who leave while on three-year probation. The three-year probation intervention affords managers with greater flexibility to terminate poor performers as well as for individuals to self-select out if they determine that the position is not appropriate for them. In Year Eight, two employees under the three-year probation left, both due to resignation. Both of these employees were in their second year of the three-year probation and had not been made permanent in Year Eight.

4.3. The Demonstration Project recruitment and staffing interventions are working well, although many of the interventions are no longer unique to the Demonstration Project

The Demonstration Project implemented a number of interventions aimed to attract high quality candidates and to speed up the recruiting and examining process. These interventions include delegated examining authority, local authority for recruitment payments, flexible entry salaries, and flexible paid advertising. Overall, these recruitment and staffing interventions are designed to attract highly qualified candidates and get new hires on board faster. Delegated examining authority, supported by flexible paid advertising, allows hiring officials to focus on more relevant recruiting sources. Local authority for recruitment payments provides extra incentives for hiring high quality candidates.

It is important to recognize, however, that many of the recruitment and staffing interventions are no longer unique to the Demonstration Project. For example, delegated examining authority and merit assignments are recruitment methods that are available elsewhere. Similarly, flexible paid advertising is not unique. Given this reality, we sought to examine whether the interventions appeared to be working effectively in the Demonstration Group and evidence of improvement over time. We also focused on the intervention that is less available elsewhere: flexible entry salaries. The ability to offer flexible entry salaries is a recruiting tool that gives hiring officials greater flexibility to offer starting salaries to highly qualified candidates that are more competitive with public and private industry.

In Year Eight, our findings suggest that the Demonstration Project is having success with some of the unique recruitment and staffing interventions. For example, flexible entry salaries provides managers with the latitude to attract competitive candidates.

4.3.1. Based on objective data, employees hired during the Demonstration Project years have slightly outperformed more tenured employees, which provides some indication that the quality of new hires is improving

During Year Eight, 437 new hires were brought into the Demonstration Group, as identified in the objective data file. This represents an increase from Year Seven, in which 391 new hires were brought into the Demonstration Group. The Comparison Group experienced a decrease from 140 new hires in Year Seven to 116 new hires in Year Eight.

One of the objectives of the Demonstration Project is to attract and hire more qualified candidates. In order to examine the relationship between hiring interventions and the ability to attract high quality candidates, DoC would need to capture objective measures about not just the new hires, but also on the quality of applicants. It is our understanding that data on applicant pools is not currently captured in such a way to facilitate this analysis.

Given the limitations on assessing the quality of applicants, a new analysis was performed beginning in Year Five to examine, as a proxy, whether new hires to the Demonstration Project outperform those who were hired prior to the Demonstration Project's initiation. Positive results would suggest that, on average, new hires are of a higher quality than "tenured" employees; however, in the absence of comparative information on job applicants, the results would not be able to address how the new hires compared to other applicants who applied for the same positions.

To perform this analysis, all Demonstration Group participants who were hired into the Demonstration Project in Years One-Seven, and who still remained in the Demonstration Group in Year Eight, were identified. We did not include Year Eight new hires because: one, only some are hired early enough in the performance year to have a performance score, and two, one could argue that new hires experience a learning curve at the beginning of a new job and therefore should be excluded from this type of analysis.

Among the new hires who joined the Demonstration Project during Years One-Seven, 1,781 remained in Year Eight. The analysis was then based upon the 1,598 of the 1,781 new hires from Years One-Seven who had eligible performance ratings and performance scores in Year Eight. The results showed that the average performance score for these new hires from across the years was 86.8 points, which was slightly higher than the average performance score for those who were hired prior to the start of the Demonstration Project of 86.0 points. This difference is in the desired direction to add credence on the quality of new hires improving; however, the difference is so slight that it still remains inconclusive. The small magnitude of the difference is also comparable to the results found in Year Seven, Year Six, and Year Five.

4.3.2. Hiring ratings varied by organization

As displayed in Table 4–20, the rate of hiring varied across participating organizations. CFO/ASA experienced the most significant increase in staff, followed closely by ESA-BEA. TA experienced the smallest staffing increase; consistent with this, the TA site historian reported that TA was unable to replace departing staff due to budget constraints and expects to further reduce hiring as well as staffing levels in the year to come.

Overall, varying rates of hiring likely reflect a number of factors including the specific functional needs of each organization, availability of qualified applicants in the job market, the need to replace staff that have turned over, and budgetary objectives.

Table 4–20. New Hires by Organization

ORGANIZATION	NUMBER OF EMPLOYEES	NUMBER OF NEW HIRES	STAFFING INCREASE
ESA-BEA	550	63	12.9%
NTIA	86	8	10.3%
NOAA	3556	297	9.1%
TA	25	0	0.0%
CFO/ASA	433	69	19.0%
TOTAL	4650	437	10.4%

Notes:
1. *Staffing increase was computed as the increase from the number of employees minus the new hires to the number of employees.*
2. *These data are based upon the objective data file.*

4.3.3. In Year Eight, recruitment payments were used in the Demonstration Group more so than in the Comparison Group, but not to a great extent overall

Based on the objective datafile, 5 of the 437 (1.1 percent) new hires in the Demonstration Group during Year Eight received a recruitment payment. These payments ranged from approximately $100 to $6,000. This level of use and size of payment is somewhat lower than Year Seven. While recruitment payments are also now available under U.S.C. 5753[19], this usage level is greater than in the Comparison Group where, in Year Eight, no new hires received a recruitment payment.

4.3.4. Demonstration Group supervisors are taking advantage of their ability to offer more flexible entry salaries.

Consistent with previous years, objective data also show that managers in the Demonstration Group generally used a wider range of salaries for new hires than in the Comparison Group, as displayed in Table 4–21. Starting salaries were compared by sorting new hires by path and by band (or their equivalents for Comparison Group members). Out of 13 possible

19 To note, shortly following the timeframe of this evaluation, the Demonstration Project rescinded its independent authority to pay recruitment payments and, as of the date of this report, has the authority to pay recruitment incentives under 5 U.S.C. 5753 and 5 CFR part 575, subpart A. See 71 FR 25615.

comparisons in starting salaries (categories in which both the Demonstration and Comparison Groups had at least two new hires), the range of salaries was wider in the Demonstration Group in eleven of them (85 percent), which is slightly lower than Year Seven (93 percent) but exceeds the results from Year Six (75 percent), Year Five (82 percent), and Year Four (80 percent). For each comparison between the Demonstration Group and the Comparison Group, the wider range in starting salaries appears in bold. It should be noted that while differences in locality pay have not been specifically factored into this analysis, locality payments were included in the starting salaries used in this analysis given that the Demonstration Project pay tables are based on the GS pay tables (which include locality pay).

Table 4–21. Comparison of Starting Salary Ranges Among New Hires in the Demonstration and Comparison Groups

	Demonstration Group		Comparison Group	
	Number of New Hires	Size of Range of Starting Salaries	Number of New Hires	Size of Range of Starting Salaries
ZA				
Band 1	6	**$11,419**	2	$108
Band 2	32	**$28,430**	11	$10,468
Band 3	32	**$33,559**	8	$15,741
Band 4	18	$37,285	9	**$40,808**
Band 5	6	$11,753	0	-
ZP				
Band 1	8	$14,582	1	-
Band 2	56	**$23,531**	24	$19,585
Band 3	51	**$64,200**	29	$31,594
Band 4	33	**$50,404**	6	$25,639
Band 5	15	$44,774	1	-
ZS				
Band 1	11	**$6,507**	2	$88
Band 2	9	**$8,428**	4	$2,915
Band 3	20	**$20,860**	4	$10,058
Band 4	20	**$21,585**	2	$7,212
Band 5	2	$4,326	1	-
ZT				
Band 1	12	$14,000	0	-
Band 2	3	**$1,950**	3	$134
Band 3	2	$0	6	**$12,528**
Band 4	0	-	1	-
Band 5	0	-	0	-

Notes:

1. *The number of cases used in this analysis is based on the number of new hires for whom starting salary, career path, and pay band data were available (i.e., 336 of the 435 new hires in the Demonstration Group and 114 of the 116 new hires in the Comparison Group).*
2. *Size of range of was computed as by subtracting the smallest starting salary from the largest starting salary.*

4.3.5. Few differences existed between the Demonstration Group and the Comparison Group in the use of available hiring methods

Based on data provided by the participating organizations on the use of various methods for hiring in Year Eight, the Demonstration Group used delegated examining authority for 104 candidates and merit assignment for 94 candidates, indicating a slightly higher use of delegated examining authority. The Comparison Group used delegated examining authority for 53 candidates and merit assignment for 48 candidates, also indicating a slightly higher use of delegated examining authority (see Table 4–22). This is consistent with Year Seven, during which delegated examining authority was also more frequently used by both the Demonstration Group and the Comparison Group, and in contrast to Year Six, during which merit assignment was more frequently used by both the Demonstration Group and the Comparison Group.

The Demonstration Group had nearly the same level of success with the number of job offers accepted using delegated examining authority (99 percent) and merit assignment (100 percent) and, overall, had a near perfect acceptance rate. The Comparison Group had nearly the same level of success with merit assignment and delegated examining authority, with a slight advantage with merit assignment.

In the Demonstration Group, approximately nine percent of job offers were re-negotiated, which is consistent with Year Seven. In these cases, by being able to negotiate salaries, managers are able to increase their ability to obtain competitive candidates. Unlike Year Seven when no job offers were re-negotiated in the Comparison Group, 11 percent were re-negotiated in Year Eight.

The Demonstration Group and the Comparison Group reported similar times for two classification activities: 1) the average amount of time needed to produce and classify a position and 2) the average amount of time needed to process a classification action. This differs from Year Seven, when the Demonstration Group reported faster times. Both groups reported faster times in Year Eight than in Year Seven, suggesting that some efficiencies have been gained in each of the processes employed.

In Year Eight, the average number of calendar days required to fill a position (from initial posting of vacancy to selection) was faster for the Demonstration Group than the Comparison Group at 69 and 86 days, respectively. However, these times are slower than in Year Seven, when the Demonstration Group reported an average of 52 days and the Comparison Group reported an average of 54 days. It is unclear whether the difference from one year to the next is due to a slow down in processing time or reflective of job market conditions. An additional factor is that some positions require a security clearance before an employee can report for duty, which also tends to slow down the hiring process.

Table 4–22. Agency Data Request Results – Recruitment Methods

	DEMONSTRATION GROUP			COMPARISON GROUP
	TOTAL	*Wave 1*	*Wave 2*	TOTAL
Delegated Examining Authority				
Total number of offers made	104	*71*	*33*	53
Total number of offers accepted	103	*70*	*33*	51
Total number of offers re-negotiated (per candidate)	15	*10*	*5*	10
Acceptance rate (offers accepted/offers made)	99%	*99%*	*100%*	96%
Merit Assignment				
Total number of offers made	94	*60*	*34*	48
Total number of offers accepted	94	*60*	*34*	47
Total number of offers re-negotiated (per candidate)	2	*1*	*1*	1
Acceptance rate (offers accepted/offers made)	100%	*100%*	*100%*	98%
Classification				
Average amount of time needed to produce and classify a position	.6 day	*.6 day*	*.5 day*	.5 day
Average amount of time needed to process a classification action	.6 day	*.6 day*	*.5 day*	.5 day
Time to Fill Positions				
Average number of calendar days required to fill a position (from initial posting of vacancy to selection)	69 days	*63 days*	*75 days*	86 days

Note:

1. *The HR organizations collectively reported 197 new hires into the Demonstration Group during Year Eight. This total is less than the number of new hires documented in the objective data file because this total includes only those new hires brought on through delegated examining authority and merit assignment. It does not include other categories of new hires, such as temporary hires (e.g., students).*

4.4. Many of the retention interventions are having the desired effect as employee motivators

The series of retention interventions available to the Demonstration Project have the potential to motivate and retain high performing employees. The interventions that were intended to impact retention include the ACS, performance-based pay increases, performance-based bonuses, local authority for retention payments, supervisory performance pay, and more flexible pay increase upon promotion within a broadband framework. The intent was that these interventions would offer a structure (i.e., broadbanding) and incentive to motivate high performers to stay.

In Year Eight, and consistent with past years, it appears that many of these interventions are having the desired effect. Objective data analyses show that turnover is greater among lower performers and that managers are taking advantage of being able to offer flexible pay increases upon promotion.

4.4.1. In the Demonstration Group, the relationship between turnover and performance scores is in the desired direction

One goal of the Demonstration Project is to retain higher performing employees. Overall, 355 of the 4,650 Demonstration Group participants (7.6 percent) separated in Year Eight. Ultimately, it is hoped that lower performing employees will separate at higher rates than will higher performing employees. As displayed in Table 4–23, dividing Demonstration Group participants into performance score groupings shows clear evidence of the desired relationship in Year Eight. By looking at the relative turnover rates across different levels of performance, it is clear that turnover is higher among those with lower scores (e.g., 33.3 percent of employees with scores in the 40-49 range turned over) and turnover is lower among those with higher scores (e.g., 1.9 percent of employees with scores in the 90-100 range turned over), results that are consistent with past years. (For this analysis, turnover was defined as employees who retired, resigned, terminated, or otherwise separated from the Demonstration Project.)

Table 4–23. Demonstration Group Turnover Rates by Level of Performance

PERFORMANCE SCORE CATEGORY	NUMBER OF EMPLOYEES	NUMBER OF SEPARATED EMPLOYEES	TURNOVER RATE
90-100	1304	25	1.9%
80-89	2309	79	3.4%
70-79	321	22	6.9%
60-69	51	5	9.8%
50-59	9	2	22.2%
40-49	3	1	33.3%

Notes:

1. *The total number of employees in this analysis is based on the 3,997 employees for whom valid Year Eight performance scores of 40 and above were available.*
2. *Overall, 355 employees separated during Year Eight. The total number of separated employees in this analysis is based on 134 of the 355 employees who separated in Year Eight for whom valid Year Eight performance scores were available.*
3. *The overall turnover rate for the Demonstration Group is 7.6 percent, which differs from a weighted average of the rates presented in this table. The reason for this difference is that the overall turnover rate is based on the number of employees who separated during Year Eight based on the total number of employees in the Demonstration Group, regardless of whether performance scores were available.*

4.4.2. Turnover rates in the Demonstration Group and Comparison Group were reasonably similar and consistent with the past few years

Comparing Demonstration Group turnover to Comparison Group turnover can be an indicator of the relative success of retention efforts. However, this analysis has its limitations because, in the Comparison Group, turnover can only be examined in the aggregate and not by performance levels (due to the fact that the majority of the Comparison Group is on a pass/fail performance rating system). Without information about performance levels, turnover rates can be interpreted in different ways. For example, lower turnover rates can be interpreted as a positive because more employees were retained. However, higher turnover rates can also be interpreted as a positive because this may suggest that lower performers are leaving, resulting in a stronger workforce overall. Given these limitations, we compare turnover between the groups but recognize that conclusions are difficult to draw absent of meaningful performance data for the Comparison Group.

Turnover was calculated as the number of employees who retired, resigned, terminated, or otherwise separated from the Demonstration Project, divided by the total number of Demonstration or Comparison Group participants. During Year Eight, turnover was 8 percent in the Demonstration Group and 5 percent in the Comparison Group. This represents an increase for the Demonstration Group and status quo for the Comparison Group compared to Years Seven, Six, and Five. Both of these rates represent a significant drop from Years Two-Four, which is very likely reflective of different labor market conditions.

When the Year Eight Demonstration Group turnover is examined by wave, those in Wave 1 experienced 7.7 percent turnover and those in Wave 2 experienced 7.4 percent turnover. This gap in turnover rates is not considerable (and is smaller than in Year Seven) but will be closely monitored in future years in case the turnover rates diverge further.

The cumulative turnover rate was calculated as the total number of separations in Years Two through Eight divided by the average number of Demonstration (or Comparison) Group participants (the average number across Years Two through Eight). (In Year One, data were not available on the number of separations and therefore could not be included in this calculation.) Over Years Two through Eight there has been a cumulative turnover rate of 69 percent in the Demonstration Group. In comparison, the cumulative turnover rate in the Comparison Group was 55 percent. Table 4–24 displays these results. The higher cumulative turnover rate in the Demonstration Group may be indicative of progress toward eliminating lower performers, which is supported by the evidence (previously presented) that lower performers are turning over at higher rates than high performers.

Table 4–24. Turnover Rates by Group

GROUP	YEAR TWO	YEAR THREE	YEAR FOUR	YEAR FIVE	YEAR SIX	YEAR SEVEN	YEAR EIGHT	CUMULATIVE OVER YEARS TWO-EIGHT
Demonstration Group	13%	16%	15%	5%	5%	7%	8%	64%
Comparison Group	10%	11%	15%	4%	5%	5%	5%	54%

Of those who turned over, the most common reasons in the Demonstration Group were retirement (40 percent), resignation (27 percent), termination[20] (22 percent), and transfer (8 percent); the remaining 3 percent, combined, were due to death, removal, and termination while on probation. In comparison, the most common reasons in the Comparison Group were retirement (55 percent), resignation (31 percent), termination (8 percent), and death (3 percent); the remaining 3 percent, combined, were due to removal. While the separation reasons are reasonably parallel, one noticeable difference of relevance to the Demonstration Project performance-focused interventions is that a greater percentage of Demonstration Group participants were terminated (22 percent) than were Comparison Group participants (8 percent), which adds additional support that the Demonstration Project's emphasis on performance may be having an impact.

20 The "termination" code includes: termination – transfer to another agency; separation; termination disability; termination – expiration of appointment; separation – RIF; and termination

4.4.3. The link between turnover and performance levels is also evident when examined by career path

Average turnover rates varied somewhat by career paths in Year Eight, as displayed in Table 4–25. These results show that turnover is greatest among ZS, which is also the career path with the lowest average performance score. In addition, these results show that turnover is lowest among ZP, which is the career path with one of the highest average performance scores in Year Eight. This finding provides further evidence of an appropriate and desired relationship between turnover and performance levels.

Table 4–25. Average Turnover Rate by Career Path

CAREER PATH	NUMBER OF EMPLOYEES	NUMBER OF EMPLOYEES WHO TURNED OVER	AVERAGE TURNOVER RATE	OVERALL AVERAGE PERFORMANCE APPRAISAL SCORE
ZP	2775	156	5.6%	86.6 points
ZT	262	23	8.8%	85.6 points
ZA	1095	116	10.6%	86.6 points
ZS	518	60	11.6%	84.0 points

Notes:

1. *Average turnover rates were computed based on 4,650 of the 4,650 Demonstration Group participants for whom career path and turnover data were available.*
2. *Overall average performance appraisal scores by career path were computed based on the 3,998 of the 4,650 Demonstration Group participants for whom career path and performance score data were available; these averages are not restricted to the subset of individuals who turned over in Year Eight nor to those for whom turnover data were available.*

4.4.4. Turnover was greatest among TA and CFO/ASA and lowest among the Wave 2 NOAA organizations

Average turnover rates also varied somewhat by organization in Year Eight, as displayed in Table 4–26. Those NOAA organizations that are part of Wave 2 experienced the lowest turnover, at 3.8 percent. The highest turnover was experienced by TA at 40.0 percent, followed by CFO/ASA at 16.2 percent. The majority of TA's turnover was due to retirement (at 50 percent of the TA turnovers, higher than the average for the Demonstration Group) and termination (at 40 percent of the TA turnovers, higher than the average for the Demonstration Group). The majority of CFO/ASA's turnover was due to termination (at 37 percent of the CFO/ASA turnovers, higher than the average for the Demonstration Group), retirement (at 31 percent of the CFO/ASA turnovers, lower than the average for the Demonstration Group), and resignation (at 24 percent of the CFO/ASA turnovers, nearly on par with the average for the Demonstration Group)

Table 4–26. Average Turnover Rate by Organization and Wave

ORGANIZATION	NUMBER OF EMPLOYEES	NUMBER OF SEPARATED EMPLOYEES	TURNOVER RATE
Wave 1			
ESA-BEA	550	48	8.7%
NTIA	86	9	10.5%
NOAA	2549	180	7.1%
TA	25	10	40.0%
Wave 2			
NOAA	1007	38	3.8%
CFO/ASA	433	70	16.2%

Note:

1. *This analysis is based on the 4,650 of the 4,650 of the Demonstration Group participants for whom organization and wave data were available.*

4.4.5. Individuals who separated had, on average, lower performance-based pay increases, bonuses, and total awards than the individuals who remained

In Year Eight, there was a clear distinction in pay between those who separated and those who remained when total awards are calculated. Those who separated had, on average, lower performance-based pay increases, slightly lower bonuses, and lower total awards (performance-based pay increase plus bonus) than those who remained. (The average for leavers is based on those who left *after* receiving an appraisal and increase, for whom data were available.) The results are presented in Table 4–27. These findings provide additional support that the Demonstration Project is turning over lower performers (who presumably received lower increases).

Table 4–27. Stayers Versus Leavers: Percent Increases and Bonuses

Type of Award	Average Award (as a Percentage of Salary)	Average Award (in Dollars)
Performance-Based Pay Increase		
Stayers	3.4%	$2,511
Leavers	1.7%	$1,275
Bonus		
Stayers	2.0%	$1,561
Leavers	1.6%	$1,411
Total Awards (Performance-Based Pay Increase Plus Bonus)		
Stayers	5.4%	$4,020
Leavers	3.2%	$2,558

Notes:

1. *Average awards were computed for the Demonstration Group participants for whom turnover, salary, and bonus data were available (3,745 for the performance-based pay increase analysis and 3,997 for the bonus analysis).*
2. *The difference between performance-based pay increases for stayers and leavers was statistically significant at the $p \leq .01$ level. The difference between bonuses was not statistically significant. The difference between total awards was statistically significant at the $p \leq .01$ level.*
3. *The average award, in dollars, for the total awards is not a simple sum of the totals reported for performance-based pay increase and bonus because this calculation was based on only those individuals for whom both performance-based pay and bonus data were available.*

4.4.6. In Year Eight, retention payments were once again used

Retention payments are an intervention[21] that can serve as a tool for retaining high performing employees, especially those with expertise in critical skill areas. Analyses showed that retention payments were not used in Years One-Five of the Demonstration Project. In Year Six, two Demonstration Group participants (and two Comparison Group participants) received retention payments and, in Year Seven, the trend continued with three Demonstration Group participants (and three Comparison Group participants) receiving retention payments. The results for Year Eight were comparable: three Demonstration Group participants (and three Comparison Group participants) received retention payments.
The interest, in the past few years, to use retention payments is promising given that retention payments offer managers an additional option for retaining high performers (albeit this option is now available both within and beyond the Demonstration Project). While some use of retention payments is promising, widespread use of retention payments is not expected to occur given the restrictions on when they can be awarded (i.e., retention payments can only be paid to employees leaving the Federal Government, which occurs infrequently, or for employees who are retiring). However, an increased level of usage of retention payments would not be surprising as the percentage of employees who are retirement eligible increases within Commerce, along with the Federal Government overall.

4.4.7. In Year Eight, turnover was higher among those who received supervisory performance pay compared to those who did not

As shown in Table 4–28, in Year Eight, turnover among Demonstration Group supervisors (6.2 percent) was slightly lower than the turnover for all Demonstration Group participants (7.6 percent) and slightly higher than Comparison Group supervisors (4.4 percent). As discussed in regards to turnover overall, the moderately low turnover rates across the Demonstration Group and Comparison Group, and across employees and supervisors, were likely driven by labor market conditions.

In theory, the supervisory performance pay intervention facilitates paying supervisors at more competitive levels, which could improve retention. However, in Year Eight (as occurred in Year Seven), turnover was greater among supervisors who received supervisory performance pay (13.2 percent) than among supervisors who did not receive supervisory performance pay (4.0 percent). One possible explanation for this discrepancy would be that, given that supervisory performance pay is associated with being at higher salary levels, individuals on supervisory performance pay may also be closer to retirement age. An analysis confirmed this assumption: retirement accounted for 90 percent of the turnover among those eligible for supervisory performance pay and only (relatively speaking) 53 percent of the turnover among those not eligible for supervisory performance pay.

21 To note, shortly following the timeframe of this evaluation, the Demonstration Project rescinded its independent authority to pay retention payments and, as of the date of this report, has the authority to pay retention incentives under 5 U.S.C 5754 and 5 CFR part 575, subpart C. See 71 FR 25615.

Table 4–28. Turnover Among Supervisors

Group	Total Number	Number Who Separated	Turnover Rate
Demonstration Group			
All Employees	4,650	355	7.6%
All Supervisors	631	39	6.2%
Supervisors Who Did Not Receive Supervisory Performance Pay	479	19	4.0%
Supervisors Who Did Receive Supervisory Performance Pay	152	20	13.2%
Comparison Group			
All Employees	2,124	99	4.7%
All Supervisors	136	6	4.4%

Notes:
1. *Turnover rate was calculated as the number of individuals who separated divided by the total number of individuals.*
2. *"All Employees" includes supervisory and non-supervisory employees.*

4.4.8. Turnover was higher among those who are salary capped than those who are not

As mentioned earlier, approximately 15 percent of the Demonstration Group participants who had eligible performance ratings and for whom salary data were available were salary capped and an additional seven percent were nearly capped. While salary capping occurs in many pay systems, it can have an impact on employees' perceptions – and their motivation – within a pay-for-performance system.

Starting in Year Eight, we examined the turnover rates for salary capped employees compared to others. The analysis showed that the turnover rates for those who were capped (5.5 percent) or nearly capped (6 percent) was higher than for those not capped (3.8 percent). This analysis will be conducted in future years as well to see if any trends emerge.

4.5. The Demonstration Project interventions continue to reflect a system in which there is no evidence of unfair treatment based on race, gender, or veteran status

Booz Allen performed a series of analyses on objective and subjective data pertaining to performance, compensation, and demographics of the Demonstration Project participants. Consistent with previous years, these analyses in Year Eight suggest that the Demonstration Project has not been detrimental to the compensation, recruitment, or retention of minorities, women, or veterans.

4.5.1. The Demonstration Project did not negatively impact the hiring of minorities, women, and veterans

Table 4–29 shows that, in Year Eight, the proportion of minority, women, and veteran new hires to the Demonstration Group was greater than their representation in the employee population overall. This pattern of results mirrors past years, and shows continued progress to diversification. Overall, these findings suggest that the Demonstration Project interventions are not harming DoC's ability to diversify its employee population. (Importantly, while this analysis demonstrates that there was sufficient diversity of new hires relative to the Demonstration Group population overall, it cannot address the diversity of the applicant pool from which new hires were drawn and the rates of hire per each group.)

Table 4–29. Diversity of New Hires Compared to the Overall Demonstration Group

Category	New Hires (N=437)	All Demonstration Group participants (N=4,650) in Year Eight	All Demonstration Group participants (N=2,697) in Year One
Race/National Origin			
White (not of Hispanic origin)	72%	77%	81%
Black (not of Hispanic origin)	16%	13%	12%
Hispanic	4%	3%	3%
Asian or Pacific Islander	8%	6%	4%
American Indian or Alaskan Native	<1%	<1%	<1%
Gender			
Women	52%	43%	39%
Men	48%	57%	61%
Veteran Status			
Veteran	14%	12%	9%
Non-Veteran	86%	88%	91%

Note:
1. The number of new hires reported here is based on the number of new hires reported in the objective datafile.

4.5.2. Consistent with past years, in Year Eight, the Demonstration Group's pay for performance system did not reward participants differently based on race, gender, or veteran status in terms of average performance-based pay increases or bonuses

As in previous years, we analyzed objective data on the distribution of performance-based pay increase percentages and bonus percentages by minority status, gender, and veteran status. In regards to minority status, beginning in Year Six, the analysis was at the level of race/national origin rather than minority/non-minority. This was done to allow for a finer level of detail on the potentially differential experiences of the various minority subgroups that would otherwise be treated as similar in the general "minority" category.

Given the complexities of interpreting results when there are multiple groups rather than a dichotomous minority/non-minority categorization, the analysis was slightly altered in Year Six (and used thereon) to improve interpretation. Rather than requiring the reader to infer the linkage between pay and performance based on a side-by-side display of performance scores and average performance-based pay increase percentages and average bonus percentages as was done in the past, we accounted for performance score in the calculation of average performance-based pay increase percentages and performance bonuses to ease readability of the results.

To perform the analysis, we first computed raw averages for the average performance-based pay increase percentages and performance bonus percentages, broken down by race/national origin, gender, and veteran status. However, raw averages fail to account for differences in other factors that affect the calculation of averages. Therefore, we also computed "adjusted averages," which are adjusted for the impact of other factors (i.e., performance score, career path, length of service, and organization) on the relationship and therefore produce a more useful way of examining the data. (See Appendix B-2 for a more detailed description of the ANCOVA process for computing adjusted averages and interpreting the results.)

The rationale for including performance score in the analysis is that it is feasible that performance scores may differ across demographic subgroups. (Average performance scores for Year Eight for the various demographic subgroups are displayed in Table 4–30.) Similarly, we controlled for career path, length of service, and organization because these may also differ across demographic subgroups. In essence, the advantage of examining adjusted averages is that it answers the question: within any career path and any organization, at a given level of length of service, and at a given performance score, is there a difference in performance-based pay increase percentages between subgroups?

Table 4–30. Average Performance Score by Group

	Average Performance Score
White (not of Hispanic origin)	86.6 points
Black (not of Hispanic origin)	84.9 points
Hispanic	86.0 points
Asian or Pacific Islander	86.3 points
American Indian or Alaskan Native	86.1 points
Female	86.4 points
Male	86.2 points
Veteran	84.7 points
Non-Veteran	86.5 points

Table 4–31 presents the raw and adjusted averages (the reader is advised to consider the latter as more meaningful) broken out by demographic subgroups. As depicted, the average performance-based pay increase percentages, after controlling for any differences attributable to performance score, career path, time in service, and organization, ranged from 3.1 percent to 3.7 percent for race/national origin, 3.3 percent to 3.4 percent for gender, and 3.3 percent to 3.4 percent for veteran status. With respect to race/national origin, only two differences were statistically significant[22] (the difference between Asian or Pacific Islander and Black (not of Hispanic origin) and the difference between Asian or Pacific Islander and White (not of Hispanic origin); however, these differences were not of a large enough size to be considered meaningful using standard statistical testing procedures[23]. Neither the gender nor veteran status differences were statistically significant.

Similarly, there were few differences in average bonus percentages, by race/national origin, gender, or veteran status after controlling for any differences attributable to performance score, career path, time in service, and organization. As depicted, the average bonus percentages, after controlling for any differences attributable to performance score, career path, time in service, and organization, ranged from 1.8 percent to 2.1 percent for race/national origin, 2.0 percent to 2.0 percent for gender, and 2.0 percent to 2.1 percent for veteran status. With respect to race/national origin, only two differences were statistically significant (the difference between Black (not of Hispanic origin) and Asian or Pacific Islander and the difference between Black (not of Hispanic origin) and White (not of Hispanic origin); however, these differences were not of a large enough size to be considered meaningful using standard statistical testing procedures. Neither the gender nor veteran status differences were statistically significant.

22 Based on statistical significant testing at $p < .05$.
23 Based on eta squared values (an estimate of the size of the effect) greater than .05.

Overall, the results of this analysis show that there were no meaningful differences in how minorities, women, and veterans fared in terms of pay increase percentages and award percentages. In Year Eight, the Demonstration Group's pay for performance system did not reward participants differently based on race, gender, or veteran status in terms of average performance-based pay increases or bonuses.

Table 4–31. Average Pay Increase Percentages (Raw and Adjusted) and Bonus Percentages (Raw and Adjusted) for the Demonstration Group

	Average Performance-Based Pay Increase Percentage		Average Bonus Percentage	
	Raw	Adjusted	Raw	Adjusted
White (not of Hispanic origin)	3.4%	3.4%	2.0%	2.0%
Black (not of Hispanic origin)	2.7%	3.1%	1.8%	1.8%
Hispanic	3.2%	3.3%	2.0%	2.1%
Asian or Pacific Islander	3.9%	3.7%	2.1%	2.1%
Female	3.6%	3.3%	2.2%	2.0%
Male	3.2%	3.4%	1.8%	2.0%
Veteran	2.6%	3.3%	1.8%	2.1%
Non-Veteran	3.5%	3.4%	2.0%	2.0%

Notes:

1. *Average performance-based pay increase and bonus percentages are based on appraisals conducted in September 2005 and actions effective in November 2005, as reported in the Year Eight data file provided by DoC.*
2. *Adjusted averages were computed by statistically controlling for performance score, career path, length of service, and organization.*
3. *Average performance-based pay increase percentages were computed for 3,735 of the 4,650 Demonstration Group participants for whom data were available on pay increases, performance score, career path (or equivalent), length of service, and organization.*
4. *Average bonus percentages were computed for 3,981 of the 4,650 Demonstration Group participants for whom data were available on bonuses/awards, performance score, career path (or equivalent), length of service, and organization.*
5. *The sample sizes for this analysis ranged from 109 to 3,501.*

4.5.3. Similar patterns emerged in how members of different protected classes fared in terms of average performance-based pay increases and bonuses in the Demonstration Group versus the Comparison Group

Booz Allen also examined Comparison Group data on pay increase percentages and award percentages, by demographic subgroups, to evaluate differences between the Demonstration and Comparison Groups during Year Eight. Direct comparisons were not possible due to the differences inherent in the different systems. Table 4–32 displays the data sources used from each group for purposes of comparison.

Table 4–32. Data from Demonstration and Comparison Groups Used for Comparisons

Demonstration Group	Comparison Group
Scores on a 100-point performance appraisal system	Scores on a 2-level or 5-level performance appraisal system
Performance Increase	Step Increase Quality Step Increase Promotion Increase (when the promotion was equivalent to transition within a pay band under the Demonstration Project)
Performance-based Bonuses (associated with the Performance Appraisal Cycle)	Awards (not associated with the Performance Appraisal Cycle)

Table 4–33 presents a comparison of the average pay increase percentages and the average performance bonus/award percentages, broken out by demographic subgroups, across the Demonstration and Comparison Groups. Similar to the analysis of the Demonstration Group, the analysis of the Comparison Group also controls for career path, length of service, and organization (thus, this table shows adjusted averages, presented alongside the Demonstration Group's adjusted averages); however, the analysis cannot control for performance score for the Comparison Group given that much of the Comparison Group is under a pass/fail system in which nearly everyone passes.

Overall, the results showed that there was greater consistency in pay increase percentages and average bonus/award percentages across subgroups in the Demonstration Group than in the Comparison Group. For example, average pay increases across the race/national origin groups had a 0.6 percentage point range in the Demonstration Group and a 1.5 percentage point range in the Comparison Group.

The results can also be examined more closely by race/national origin, gender, and veteran status. With respect to race/national origin, gender, and veteran status, the pattern of results differed between the Demonstration Group and the Comparison Group; however, every race/national origin, gender, and veteran status group fared better in the Demonstration Group than in the Comparison Group.

Table 4–33. Comparison of Average Pay Increases and Average Bonuses/Awards Between Demonstration Group and Comparison Group

	Average Pay Increase Percentage		Average Bonus/ Award Percentage	
	Demo Group	Comp Group	Demo Group	Comp Group
White (not of Hispanic origin)	3.4%	2.9%	2.0%	1.7%
Black (not of Hispanic origin)	3.1%	1.8%	1.8%	1.4%
Hispanic	3.3%	2.9%	2.1%	2.0%
Asian or Pacific Islander	3.7%	3.3%	2.1%	1.6%
Female	3.3%	2.9%	2.0%	1.7%
Male	3.4%	2.7%	2.0%	1.6%
Veteran	3.3%	2.5%	2.1%	1.5%
Non-Veteran	3.4%	2.9%	2.0%	1.7%

Notes:

1. *Average performance-based pay increase and bonus percentages for the Demonstration Group are based on averages that were computed by statistically controlling for performance score, career path, and length of service.*
2. *Average performance-based pay increase percentages were computed for 3,735 of the 4,650 Demonstration Group participants, and the 1,936 of the 2,124 Comparison Group, for whom data were available on pay increases, performance rating, career path (or equivalent), and length of service.*
3. *Average bonus percentages were computed for 3,981 of the 4,650 Demonstration Group participants, and the 1,940 of the 2,124 Comparison Group, for whom data were available on bonuses/awards, performance score, career path (or equivalent), and length of service.*
4. *The sample sizes for this analysis ranged from 109 to 3,501 for the Demonstration Group and 37 to 1,736 for the Comparison Group.*

4.5.4. In the Demonstration Group, turnover rates varied based on race/national origin group; the differences were less pronounced among high performers

In Year Eight, the overall turnover rate in the Demonstration Group was 7.6 percent. As depicted in Table 4–34, the turnover rates, by race/national origin groups, ranged from 4.7 percent to 13.3 percent. At the extremes, the separation rate of Hispanics was the highest at 13.3 percent, followed closely by Blacks (not of Hispanic origin) at 11.2 percent. The separation rate of Asian or Pacific Islander was the lowest at 4.7 percent. The rank order of turnover rates for these groups was distinctly different than in Year Seven, although in both years Hispanic have had higher turnover rates than nearly any other race/national origin group. Also evident is that all of the minority groups, except for Asian or Pacific Islander, turned over at slightly higher rates than Whites (not of Hispanic origin), a finding worth exploring if it continues to emerge in future years.

Among high performers (performance scores of 90–100), Blacks (not of Hispanic origin) exhibit the highest turnover rate at 2.1 percent, a small margin higher than Whites (not of Hispanic origin) at 2.0 percent. In comparison, in Year Seven, Blacks (not of Hispanic origin) had the lowest turnover rates (along with Asian or Pacific Islander) among the high performers.

Table 4–34. Comparison of Turnover Rates in the Demonstration Group Between All Participants and High Performers

	Demonstration Group All Participants			Demonstration Group High Performers		
Group	**Number**	**Number Separated**	**Percent Separated**	**Number**	**Number Separated**	**Percent Separated**
White (not of Hispanic origin)	3598	252	7.0%	1054	21	2.0%
Black (not of Hispanic origin)	616	69	11.2%	143	3	2.1%
Hispanic	143	19	13.3%	30	0	0%
Asian or Pacific Islander	274	13	4.7%	73	1	1.4%
American Indian or Alaskan Native	19	2	10.5%	4	0	0%
TOTAL	**4650**	**355**	**7.6%**	**1304**	**25**	**1.9%**

Note:
1. "High performers" is defined as those with performance scores of 90–100.

4.5.5. In comparing the Demonstration Group and the Comparison Group, a different pattern emerges in turnover rates based on race/national origin groups

The Pass/Fail rating system precludes comparing turnover rates of Demonstration Group and Comparison Group participants with consideration for performance level. A comparison of turnover rates, regardless of performance level, shows that the pattern of turnover rates was different among the Comparison Group than the Demonstration Group. Among the Comparison Group participants, Asian or Pacific Islanders experienced the highest turnover at 5.2 percent and American Indian or Alaskan Natives experienced the lowest turnover at 0.0 percent. Furthermore, the comparison between the Demonstration Group and the Comparison Group turnover rates by groups shows that in every case, except for Asian or Pacific Islander, turnover was higher in the Demonstration Group than in the Comparison Group. These results are displayed in Table 4–35.

Table 4–35. Comparison of Turnover Rates in the Demonstration and Comparison Groups

	Demonstration Group All Participants			Comparison Group All Participants		
Group	**Number**	**Number Separated**	**Percent Separated**	**Number**	**Number Separated**	**Percent Separated**
White (not of Hispanic origin)	3598	252	7.0%	1798	84	4.7%
Black (not of Hispanic origin)	616	69	11.2%	175	9	5.1%
Hispanic	143	19	13.3%	41	1	2.4%
Asian or Pacific Islander	274	13	4.7%	96	5	5.2%
American Indian or Alaskan Native	19	2	10.5%	14	0	0.0%
TOTAL	**4650**	**355**	**7.6%**	**2124**	**99**	**4.7%**

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5. RECOMMENDATIONS

This chapter presents Booz Allen's recommendations as DoC continues to operate the Demonstration Project. These recommendations are intended to enhance aspects of the Demonstration Project based on Year Eight findings as well as trend analyses covering the past eight years.

5.1. DoC should determine if the performance appraisal system's rating scale needs a re-calibration.

Over the years, the average performance appraisal score has shifted upward. Among Wave 1 participants (the group that has been in the Demonstration Project from the beginning), the average score has increased from 82.0 in Year One to 86.9 in Year Eight. It is certainly feasible that individual performance has increased over time, which would be reflected in a higher aggregate score as well as noticeably higher organizational performance. However, it is also likely that another factor at play is rating creep.

Performance appraisal systems are often designed to reasonably approximate a "bell curve," wherein the majority of individuals receive ratings in the middle of the rating scale and only a smaller number get ratings at either end (the lowest scores and the highest scores). In the case of the Demonstration Project, in Year Eight, 33 percent of the employees received scores in the 90-100 range on the 100-point scale. Accordingly, the rating distribution is now skewing toward the higher end of the scale. The challenge in this situation is that it becomes increasingly more difficult to differentiate high performers as it becomes more commonplace for employees to receive high scores.

We recommend that DoC examine whether the rating scale needs recalibration. The first step would be to do a more detailed analysis to determine the extent of the situation and if any trends or patterns are evident. The next step would be to review procedures and guidance provided to rating officials on how to determine scores, including guidance on how to achieve an appropriate range of scores across a range of performance levels. In addition, it will be important to provide guidance to the Pay Pool Managers on their role in validating the range of scores used by their Rating Officials. Finally, as necessary, DoC should develop and disseminate communications to employees regarding rating definitions, how adjustments are needed over time to the system, and the implications of changes for their own performance appraisals.

Moreover, DoC should review whether managers are closely and consistently following the Benchmark Performance Standards to ensure that scores match each employee's performance and performance plan. DoC should revisit job objectives and make sure that job objectives are written in a way that is conducive to objective evaluation. DoC should continue to review job objectives and determine if they are consistent with the concept of "SMART" objectives; that, objectives that are: 1) Specific, 2) Measurable, 3) Aligned to the organizational mission, vision, and goals, 4) Realistic/Relevant, and 5) Timed. Achievement of the objective, against these criteria, should be scored at the midpoint on the rating scale.

5.2. DoC should perform periodic reevaluations of the broadbanding structure

In Year Eight, a number of Demonstration Group participants were affected by salary capping, that is, Demonstration Group participants who had eligible performance ratings but whose salaries were at the maximums for their pay bands. Overall, in Year Eight, 15 percent of Demonstration Group participants were capped and an additional seven percent were nearly capped. In Year Seven, we made a recommendation to give proper attention to this issue given its impact on perceptions about the pay for performance system. That is, we urged paying attention to how salary capping can impact employee motivation and what actions can be taken, such as developing staff for promotion to the next band (when staff are in positions for which a band promotion is possible) or cross-training staff who need to first move laterally before progressing upward. While some pay pool managers compensate pay capped employees through the bonus process, alternate strategies should also be considered.

Having this proportion of employees salary capped does not, in itself, indicate that the broad bands are out of sync; indeed, any broadbanding system is likely to have a certain proportion of employees at the maximum. However, the presence of this proportion of salary capping does warrant attention. Given this, this year, we recommend that DoC look at the salary capping issue from the structural perspective by ensuring that it is periodically reexamining the broadbanding structure. One, DoC should reexamine whether shifts needs to occur in the minimum and maximum salary for the band; best practices suggest that shifts in the bands should be based on identifiable shifts in market rates as the driver for change. And two, DoC should reexamine whether the bandwidths need revisions; that is, whether the mapping of bands to GS grade levels is still sufficient.

5.3. DoC should engage in strategic succession planning efforts to prepare for turnover of seasoned supervisors

In Year Eight, 6.2 percent of the Demonstration Group supervisors turned over. This turnover rate is slightly lower than the overall turnover rate for the Demonstration Group (7.6 percent). However, when supervisor turnover is examined separately for supervisors who are or who are not eligible for supervisory performance pay, a distinctly different picture emerges. At 13.2 percent, turnover is considerably higher for those supervisors who are eligible for supervisory performance pay. Given that supervisory performance pay tends to associated with the more tenured, seasoned supervisors, this finding suggests that the Demonstration Project may be losing not only good performers but also institutional knowledge as these individuals retire or seek other opportunities.

We recommend that DoC take a strategic approach to succession planning to ensure no lapse in mission support or team leadership due to supervisor departures. For example, we recommend creating a short list of potential internal replacements, baseline their competencies relative to a supervisory role, and engage in efforts to ensure that these individuals receive the appropriate development opportunities to prepare them for supervisory roles. This may include developmental activities such as mentoring, shadowing, key assignments, involvement in key meetings, further competency development, and/or training. Moreover, the effort to create the short list needs to be developed in an objective, defensible manner, ideally rooted in a documented, explicit set of competencies. Finally, we

recommend creating mechanisms for knowledge management to ensure that institutional knowledge is also captured and retained.

5.4. DoC should focus attention on retention of high performers in the ZA career path

Every year since Year Three (the first year this information was tracked), the ZA career path has had the lowest or second lowest turnover rate of all the career paths. In Year Eight, ZA had the second highest turnover rate, at 10.6 percent. A partial explanation may be retirement, which accounted for 38 percent of the turnover in the ZA career path. However, the remainder of the staff turned over for a variety of other reasons including termination (30 percent) and resignation (21 percent). Moreover, among those in the ZA career path who turned over, 8.4 percent who left had performance appraisal scores of 80 or higher – a greater percentage than for any other career path.

Following the tenets of pay-for-performance, and its emphasis on performance, some of this turnover may have been welcomed by the organization. However, even when turnover occurs for legitimate reasons, it is important to consider the impact on those who remain. To this end, we recommend that DoC consider the dynamics within the ZA career path and consider whether special initiatives should be enacted to ensure that the remaining high performers feel engaged, valued, and inspired to stay with the organization. This could take several forms, including career mentoring, buddy programs for new hires, recognition and rewards, and other means of showing staff how their work contributes to the mission of the organization.

5.5. DoC should be more proactive in dealing with repeat lower performers

By its very nature, a pay-for-performance system provides the data that organizations need to identify and deal with lower performers. In theory, lower performance appraisal scores are triggers to provide employees with extra skill development, training, and/or coaching, with the aim of boosting their performance. If successful, the performance appraisal scores of lower performers who receive and respond to developmental actions should increase in subsequent years.

The Year Eight data showed that, among the Demonstration Group participants with lower performance appraisal scores (59 or below), only 3 of 13 (25 percent) turned over. Furthermore, these three individuals left due to retirement, not for performance-related reasons. Of the ten who remained, five (50 percent) had been lower performers for two or three consecutive years. While organizations have, for years, faced the daunting task of dealing with lower performers, we recommend that DoC pay particular attention to those employees whose performance has been consistently in the lower range of satisfactory.

We recommend that DoC establish a process to regularly track those with lower performance scores, with particular attention to those who appear on the list year after year, and set a standard for how long employees may stay within the lower performance ratings. Next, we recommend developing a formal process, within the Demonstration Project, for crafting developmental action plans and documenting progress against the action plans. Finally, DoC

should reiterate and carry out its policies for dealing with employees whose performance has been consistently in the lower range of satisfactory. While important in any pay system, taking action in response to lower performance is particularly important in a pay-for-performance so it is clear that the system is not about greater pay, but rather that the system is about being treated appropriately (i.e., greater pay, developmental action) relative to demonstrated performance. By continuing to allow these employees to remain in the organization, it could be de-motivating for those who are higher performers, as well as pose potential legal ramifications for not taking action.

5.6. DoC should continue to dedicate resources toward the management of Demonstration Project data

Given the increasing complexities of the Demonstration Project data, as a greater number of employees are included and as analyses become increasingly more sophisticated, DoC should continue to dedicate resources to the Demonstration Project data. The accuracy of the analyses is predicated on the quality of the data and therefore data management is paramount. This emphasis on data quality should extend beyond data management at the headquarters level and should also include ensuring that the proper training, tools, and mechanisms are in place to ensure that data are accurately and consistently managed at the participating organization level.